UCLA Luskin School of Public Affairs
Lewis Center

2012
CALIFORNIA POLICY OPTIONS

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EDITED BY DANIEL J.B. MITCHELL

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California Policy Options 2012

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PREFACE

As a school of public affairs in a public research university, UCLA Luskin has a special obligation to help solve California's most pressing political, economic, and resource challenges. Utilizing our scholarship, teaching and public convenings, we seek answers to such problems as how to invigorate a stagnant economy, create jobs, provide access to quality education and health care, protect our environment, administer fair and just public safety and prisons systems, and open a gridlocked political system.

California Policy Options is an annual collection of research and insight on issues and challenges facing the State produced by the UCLA Luskin School of Public Affairs, and the Ralph and Goldy Lewis Center which advances research solutions for California's urban and regional challenges, with an emphasis on transportation, economic development and housing, and the environment.

Each year, Professor Daniel J.B. Mitchell collects and edits a collection of new California-focused articles by faculty and graduate students associated with UCLA Luskin and the Lewis Center. The volume becomes the reader for an always lively and current undergraduate class on California policy issues taught each winter quarter by Professors Mitchell and Michael Dukakis. It is distributed to libraries and made available on School and academic websites for researchers, journalists, and citizens. Professor Mitchell also contributes a seminal analysis of the state's budget processes and details. In this particular issue there is a "conversation" between Professors Mitchell and Dukakis that gives the reader a taste of their team teaching technique.

California Policy Options exemplifies many of the values and goals of the UCLA Luskin School of Public Affairs and the Lewis Center. It works across academic boundaries. It covers a wide range of issues. And it provides dispassionate empirical analysis from both the macro and micro view of pressing public policy problems important to us all.

Franklin D. Gilliam, Jr.
Dean
UCLA Luskin School of Public Affairs

INTRODUCTION

In 2012, as in each year since the Great Recession began to unfold, much of the policy focus in California will revolve around the economy, both in the short run and the long. In their chapter on the economic outlook, Christopher Thornberg and Jordan Levine project an ongoing economic recovery in California—a state that was harder hit by the 2008 downturn than most—but at a slow pace. A challenge they see for the state going forward is a job mismatch; the sectors of the economy that are likely to be expanding and the kinds of skills they need are different from those that drove California's economic expansion before the Great Recession. One area of possible job development and new skills is the "green jobs" sector. In his chapter, Philip Romero examines the prospects for green jobs in the Los Angeles area and projects rapid growth, albeit starting from a relatively small base.

A similar theme to that of Thornberg and Levine is found by Jerry Nickelsburg in his comparison of the Texas and California economies. California, more so than Texas, faces the skill mismatch issue elaborated by Thornberg and Levine. But, in a sense, it is ahead of the curve compared with Texas. Both are very large states. But California, with almost an eighth of the U.S. population, has been experiencing a population growth slowdown. The state must reorient its economy toward that slower growth in population. Texas will one day face a similar problem; faster than average growth forever is not possible. But Texas is not there yet.

One issue that is often raised concerning job growth is the impact of regulation on employment creation. Ruth Milkman and Eileen Appelbaum report on California's Paid Family Leave program that was enacted in 2002. The program goes beyond a federal requirement that involves only unpaid leaves. Concerns were expressed by the employer community at the time the state's program was created that—although it is employ*ee* paid—it would have a negative impact on job creation. Now that there have been several years of experience under the program, however, employers have reported few problems with its operation.

California has experienced considerable legislative gridlock, often symbolized in recent years by late budget enactment. In an interview on the difficulties of governance in California, as observed by a former governor of another state, Michael Dukakis comments on the significant impact of early 20th century Progressivism on 21st century California institutions. He notes in particular that although the two-thirds requirement for state budget enactment was repealed by voters, the two-thirds supermajority for taxes remains. Dukakis indicates that while California's supermajority requirement does not constitute an absolute barrier to gubernatorial leadership, it constitutes a major challenge.

Indeed, as Daniel Mitchell's chapter reports, incoming Governor Jerry Brown inherited a budgetary challenge when he took office in January 2011. Elected on a pledge that there would be no tax increases without a vote of the people, he faced another two-thirds challenge; Brown needed a two-thirds vote of the legislature to place on the ballot a proposal for extending temporary tax increases. But ultimately he was unable to obtain the needed votes. A simply majority allowed a budget for 2011-12 to be passed but with questionable revenue assumptions and with a trigger mechanism to impose further spending cuts if the assumptions proved unrealistic.

The budget problems at the state level often obscure the fiscal problems of localities. Under Proposition 13 of 1978, local property taxes were sharply cut and constrained. Local governments became more heavily intertwined with the state government for support. As Stephen Cauley points out, however, property taxes remain a significant component of local finance. Cauley notes that in a period of steadily-rising property values, the property tax base tends to fall below market values under Prop 13 basic formula. But in recent years, as Cauley reports, there have been significant drops in property values and Prop 13's assessment mechanism can permit falling assessments and, therefore, falling property tax revenue.

Both state and local governments generally provide defined-benefit pension plans for their employees. Such plans, if they are underfunded, can pose significant long-term fiscal challenges for the governments involved. Governor Brown has proposed public pension changes as have outside groups. In her chapter, Susan Gallick notes the unique problems of the University of California pension system. While the state supported the University's pension before the 1990s, when the plan became overfunded, the state stopped contributing—seemingly on a temporary basis. After two decades, the University's plan became underfunded but the state has refused to resume support, although roughly two thirds of the contributions would come from non-state sources. Without state support, the Regents have been forced to divert core operating academic revenue to the pension fund, putting upward pressure on tuition and squeezing other activities.

Crime control is a major function of local government and involves important budgetary costs. Application of technology to crime control thus has fiscal implications. But as in all aspects of policing, there are also civil liberties implications. Kaohu Berg-Hee, Lusine Martikyan, Grant Murray, and Joon Bae Suh examine the developing technology of aerial surveillance by unmanned aircraft and its possible use in Los Angeles. They see a potential for such technology and some possible costs saving, a desirable attribute in the current era of budgetary constraint. But the options available will depend in part on federal policy.

The scope for policy making in California is clearly heavily constrained by the aftermath of the Great Recession. However, there were many issues facing the state before the downturn developed and the Recession did not erase them. Indeed, if anything, the policy challenges intensified in the ensuing economic climate. *California Policy Options 2012*, as well as earlier editions, is intended as a contribution to the state's public policy discussion.

Daniel J.B. Mitchell
Professor Emeritus
UCLA Anderson Graduate School of Management
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CALIFORNIA'S ECONOMIC OUTLOOK

CHRISTOPHER THORNBERG

JORDAN LEVINE

Christopher Thornberg is Founding Principal and Jordan Levine is Economist and Director of Economic Research, Beacon Economics LLC. www.beaconeconomics.com
This chapter reflects information available as of early fall 2011.

By the fall of 2011, the biggest fear among the news media and policymakers was that California's economy is heading for a double-dip recession. The skepticism about the current economy stems in part from the severity of the Great Recession, which took a huge psychological toll on California's residents and policymakers alike. In some sense, the state went from a mode of denial about whether the housing/mortgage bubble would ever burst (and force a correction to the key imbalances that had built up over several decades), to a mode of hysteria about whether the recovery would ever materialize.

California's Recessionary Effects
Peak-to-Trough Decline, Selected Indicators

Category	Decline
Jobs Lost (000s)	-1,366.40
Home Price Decline (%)	-57.1
Taxable Sales Decline (%)	-22.2
Residential Permit Decline (%)	-84.8
Nonresidential Permit Decline (%)	-56.6

Source: Calculations by Beacon Economics

When you take stock of the damage done during this downturn, it is easy to see why Californians are so apprehensive. There is a big hole in our economy: whether you are looking at the nearly 1.4 million jobs lost, the 57% decline in home prices, or the 22% decline in taxable sales, it's clear that California was hit hard by the recession. Many of the jobs lost were in retail and construction—sectors that are expected to lag the recovery, therefore leading to a lot of uncertainty among that segment of the unemployed. But the recessionary effects were fairly widespread, extending beyond retail and construction, with financial markets and banks also highly affected by the bursting of the bubble. This cocktail of declines in employment, consumer spending, home prices, and asset values over the past few years has left little for Californians to feel hopeful about in the absence of positive news.

On top of these psychological effects, the first half of 2011 saw several key data releases that led many in the media to fear the worst. This pessimism about the recovery first kicked off when the S&P/Case-Shiller home price index showed weakening home prices across the nation. Suddenly, grim headlines were increasingly splashed across the local daily newspapers. Mortgage News Daily looked at the data and concluded, along with many others, that "Case-Shiller Data Confirms Double-Dip in Home Prices."[1] Over the summer of 2011, unemployment remained around 9%.

Finally, that summer was capped off by the Congressional debt-ceiling debacle, with politicians playing a game of economic chicken over our willingness to meet our short-term obligations. The standoff created a great deal of uncertainty in the marketplace, and both businesses and consumers sat on the sidelines wondering what would come of the debate. Combined with the natural disaster in Japan, which had a significant impact on auto sales due to supply chain disruptions, these events caused us to see some rather weak performances in the consumer accounts in the second quarter.

Still, as bad as the news was, a double-dip recession requires drivers and data. In the run-up to the Great Recession, we had an ample supply of both. The drivers of the Great Recession were the fundamental imbalances in the housing, consumer, and financial markets. Home prices were growing too fast relative to incomes, and consumers' financial institutions were spending too much and taking on excessive amounts of debt.

Not only did we have the drivers, but the data supported a recession as well. Defaults and foreclosures started rising dramatically and the securitized real estate loans began suffering losses. The subsequent effects on the financial markets precipitated the housing and financial crisis and led to a major pullback on the part of consumers. This time around, Beacon Economics cannot find either the data or the drivers that would suggest that a double dip was imminent. In the next section, we review the data and discuss why a second recession does not seem likely at this writing.

DOUBLE-DIP: FACT OR FICTION?

Despite the double-dip hype in the media, the view at Beacon Economics is that the recovery will continue to plug along, though not at the pace that we would like to see. This recovery was always going to be a slow one. California had one of the largest housing and consumer spending bubbles in the nation and has since suffered one of the largest downturns relative to most other states. That said, most indicators to date suggest sluggish recovery from the Great Recession.

LABOR MARKETS

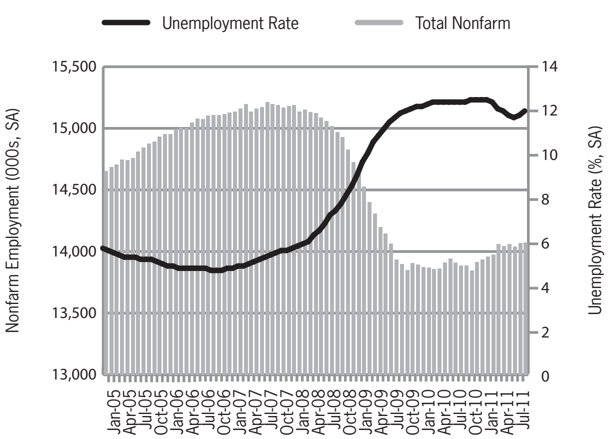
Take the labor markets as a prime example. We've heard the term "jobless recovery" in the past, and this is certainly a feature of the new economy. In response to weakening demand conditions, employers cut back on their workforce and squeeze as much productivity and efficiency as possible from those who remain. The advent of computers, robotics, and other high-technology products make this response more possible for businesses than ever before. Indeed, we can see a marked difference in employment recoveries in the last three recessions compared with earlier recessions.

Nonetheless, California's labor markets have been moving forward slowly. As of late summer 2011, the state has added back more than 225,000 nonfarm jobs since reaching bottom in 2010. Obviously this is a small number in relation to the total job losses we

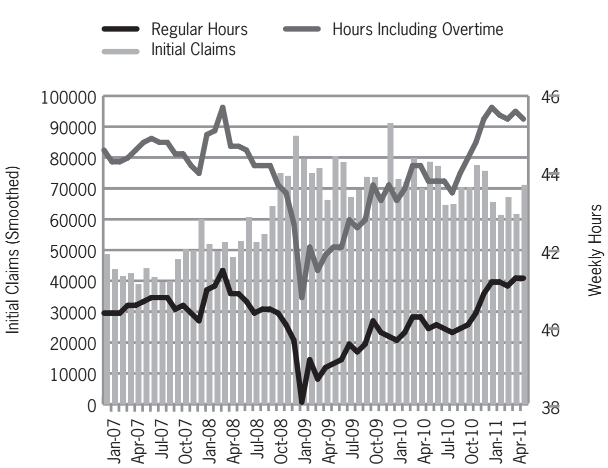
suffered, but it is a far cry from a continued decline. The unemployment rate does remain stubbornly high; about 12% at this writing. However, even on that front California is making progress, with the rate down from its peak of 12.5%.

Labor markets are traditionally a lagging indicator of economic activity, so it is not surprising that we have not seen employment take off. But new claims for unemployment in California have dropped from previous highs, a positive development. There were also gains in weekly hours in manufacturing which could presage eventual new hiring.

California Labor Markets



Initial Unemployment Claims and Weekly Hours



EXPORTS

It's not only the labor markets that give us optimism about the recovery going forward, albeit slowly. There have also been noticeable improvements in several sources of demand. Chief among these are exports. California has always been an export state, due in part to its ports and its access to the faster-growing economies in East Asia. However, California also produces the high-technology products and services that have continued to do well in the new economy. This includes pharmaceuticals, intellectual property, biotechnology products, industrial machinery, and computers. In fact, on a year-to-date basis, California's exports continue to do well, rising 12.7% over this time last year. The boost in exports has been led by our technology products (electrical and industrial machinery, and photo/optic/medical equipment), though our agricultural sector has been posting strong gains as well.

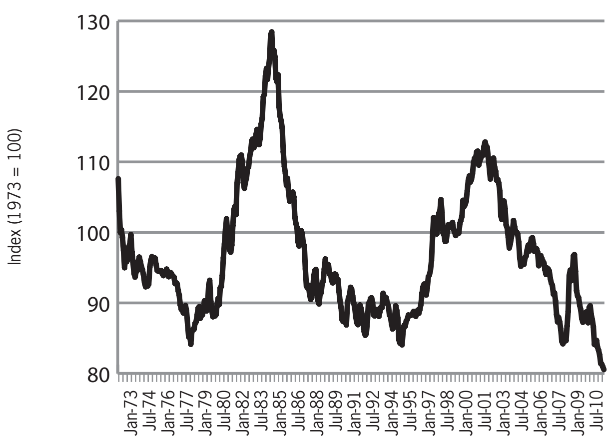
California-Made Exports by Commodity Type
(Values in $000s)

Commodity	2010 YTD	2011 YTD	Percentage Change	
			2009-10	2010-11
Electric Machinery/ Sound Equip/TV Equip	15,409.83	16,338.39	19.74	6.03
Industrial Machinery/ Computers	13,748.84	15,373.03	32.26	11.81
Optic/Photo/Medical/ Surgical Instrments	8,970.25	9,710.30	18.78	8.25
Natural Resources/ Precious Metals	3,339.90	4,168.30	63.29	24.80
Edible Fruit & Nuts/ Citrus/Melon	3,467.31	4,038.68	21.05	16.48
Vehicles/Parts	3,476.14	3,995.70	13.24	14.95
Aircraft, Spacecraft, & Parts	3,389.63	3,861.90	-10.49	13.93
Mineral Fuel/Oil/Bitumin Subst/Mineral Wax	2,483.13	3,172.57	23.03	27.76
Plastics	2,335.90	2,586.14	16.98	10.71
Pharmaceutical Products	2,248.61	2,363.62	13.59	5.11
Total	80,345.11	90,527.84	19.25	12.67

Source: Calculations by Beacon Economics

Because the U.S. dollar has weakened during the downturn, California's exports have grown even more attractive in overseas markets, and this trend is evident in the uptick in California-made exports. Currently, the "real" U.S. exchange rate measured against a broad basket of currencies is at its lowest level in over three decades. (The real exchange rate is adjusted for price movements in the U.S. and abroad.) As the price of our currency falls, California's goods become increasingly competitive on global markets. Given that the state produces goods that are in demand overseas, this tendency should continue to bolster the state's recovery moving forward.

Real U.S. Broad Exchange Rate



CONSUMPTION AND SAVING

Another positive sign for the state is that consumers are beginning to feel comfortable about opening their wallets again. In the run-up to the bubble, many households felt so asset-rich that they stopped saving for the future. In the minds of many, the surge in home equity and the value of their stocks were sufficient to finance their retirements. As a result, we saw the national saving rates fall from more than 10% in the 1980s to less than 1% by the peak of the real estate market. As the downturn gained steam, many consumers realized that a zero-savings cushion did not provide the flexibility required to deal with economic fluctuations; they pulled back sharply and began saving again.

At this writing, savings rates have popped back into the 5% range, which is still probably not enough, but household balance sheets are in much better shape than when the recession began. This development is showing up in the state's numbers on consumer spending. Although the data for the second quarter of 2011 are not available at this writing, taxable sales have risen by more than 14% from the trough in the second quarter of 2009.

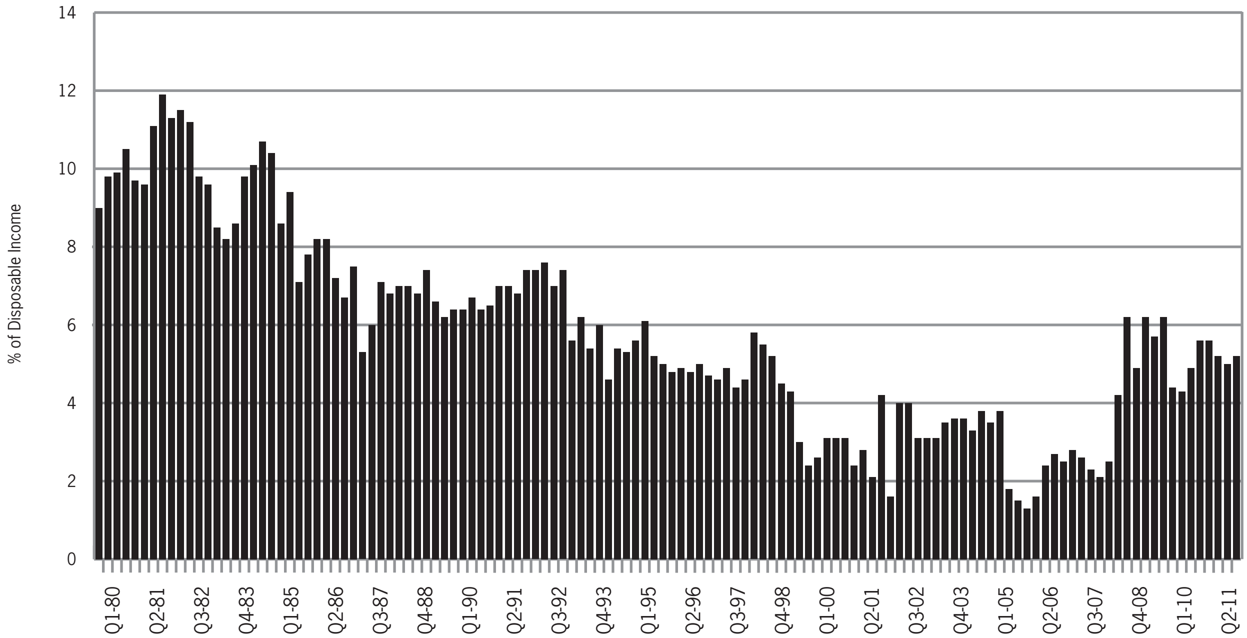
Most of these gains have come from spending on automobiles and on general entertainment, with restaurants posting solid gains in the first quarter of this year. However, the state is also benefiting from increased business investment. Specifically, the business and industry category posted a 6.1% year-over-year gain in the first three months of 2011. Given that consumers are a large part of the state's economy, this increase in spending should help to bring about increased economic growth as California moves forward.

California Sales Tax Revenue Allocations by Type Adjusted for Economic Factors

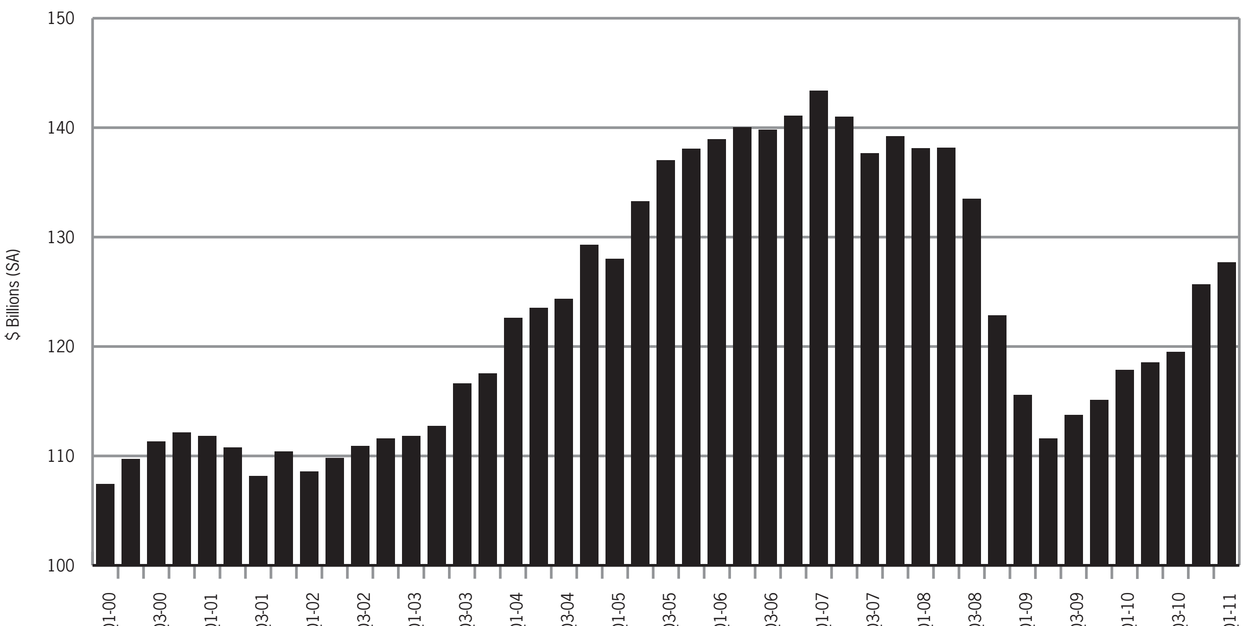
Category	2010 Q1	2011 Q1	% Change
Autos/Transportation	142,127,742.99	160,995,259.81	13.28
Building/Construction	73,706,220.14	77,746,769.87	5.48
Business/Industry	157,200,542.93	166,949,888.87	6.20
Food/Drugs	68,035,978.14	70,137,400.70	3.09
Fuel/Service Stations	120,414,739.67	147,124,997.79	22.18
General Consumer Goods	264,529,997.88	277,841,051.13	5.03
Restaurants/Hotels	132,645,507.83	140,970,581.08	6.28
Total	1,075,443,136.83	1,174,103,828.18	9.17

Source: HdL Companies

U.S. Savings Rate



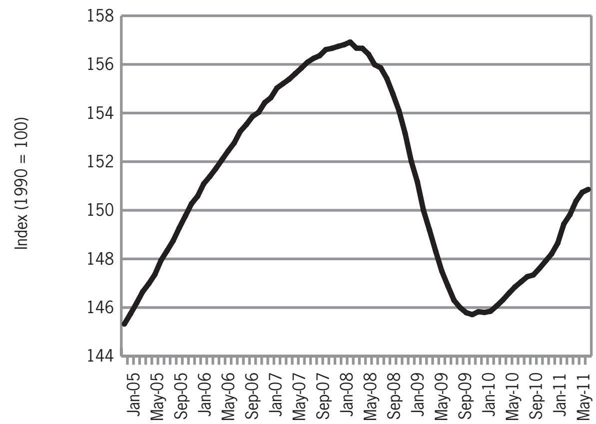
California Taxable Sales



GENERAL ECONOMIC ACTIVITY

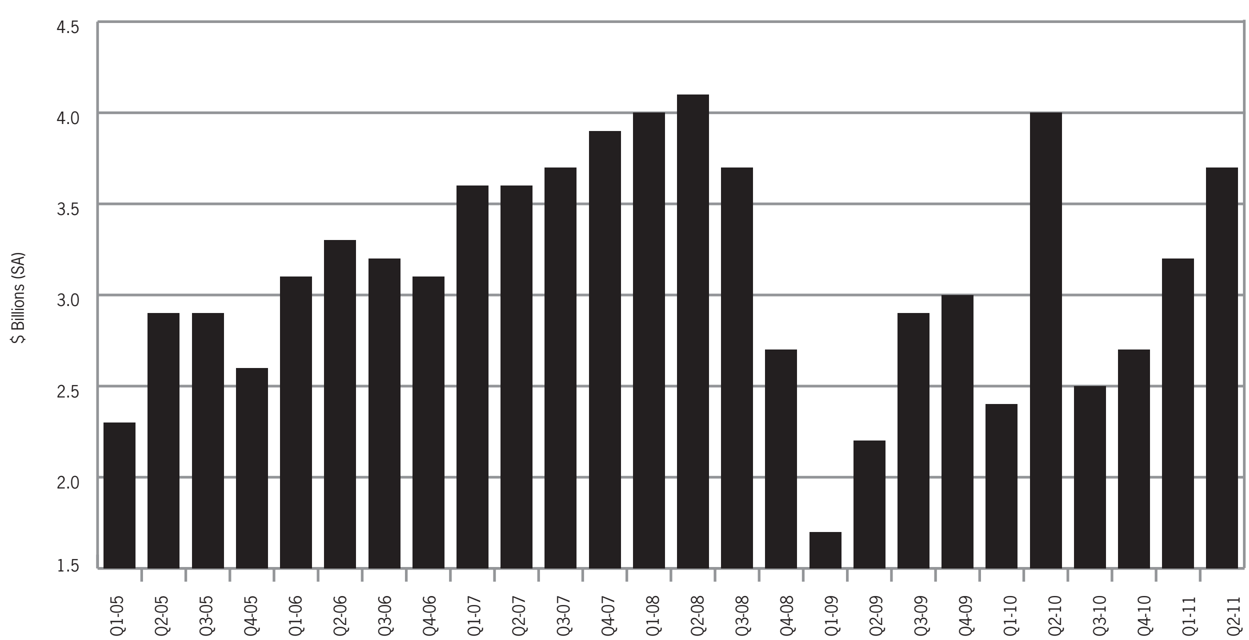
In fact, consumption trends have contributed to overall economic growth in the state. According to the Federal Reserve Bank of Philadelphia's coincident index of economic activity, California's economy is indeed on the mend. In total, it is estimated that the state has added back roughly 3.8% of its economic output since reaching bottom in October 2009. The index shows California well below its 2008 peak, but the state has seen 19 straight months of uninterrupted growth since the trough. Although the labor markets in particular leave much to be desired, there is no indication of a double dip in the economy but rather an indication of rising efficiency and rising productivity—as well as a rising skills mismatch that we will discuss below.

California Coincident Index of Economic Activity



Nonetheless, there have been some concerns about broader macroeconomic conditions due to real GDP growth slowing in the first half of 2011. Our view is that this below-average growth was temporary—mostly associated with (1) supply chain disruptions related to natural disasters in Japan and the Midwest, which caused auto sales to take a tumble, (2) the

California Venture Capital Investment



political game of chicken that defined the debt-ceiling debate, which created a sense of uncertainty among both businesses and consumers, and (3) the erosion of purchasing power fueled by the spike in oil prices, which later began to decline. Despite the transitory nature of these phenomena, policy makers and the media have all pointed to these events as a sure sign that a double-dip recession is imminent. The view at Beacon Economics is actually quite the contrary. Despite this turbulence, the underlying indicators of demand have yet to drop off despite news accounts.

California Venture Capital Investment
% of Total, Q2 2011

Sector	% Share
Software	24.1
Medical Devices and Equipment	15.0
IT Services	11.9
Biotechnology	9.7
Media and Entertainment	9.6
Industrial Energy	8.3
Semiconductors	7.6
Consumer Products and Services	2.7
Networking and Equipment	2.1
Business Products and Services	1.8
Electronics Instrumentation	1.6
Telecommunications	1.5
Computers and Peripherals	1.3
Financial Services	1.3
Healthcare Services	0.9
Retailing and Distribution	0.5
Other	0.2
Total	100.0

Source: PWC MoneyTree

In fact, when one looks to the private equity markets, many investors are still "betting" on California. Venture capital investment is on the rise. Since hitting a low of $1.7 billion in the first quarter of 2009, new venture capital investment has risen sharply—nearly 118% as of this writing. We have another cause for optimism about California's future when we see where these funds are being directed. Specifically, four sectors took home more than 60% of all the venture capital funding in the state in the second quarter of 2011: the software, medical devices and equipment, IT services, and biotechnology industries. These industries are sectors that play to California's strengths in that they require a highly skilled workforce and access to overseas markets for future growth. As the economy heals, having a concentration in these sectors will help California resume the strong growth trajectory that it exhibited before the downturn.

CALIFORNIA'S SKILLS MISMATCH: A HINDRANCE TO RECOVERY

We believe that fears of a double-dip recession were largely overblown in the media and that there are reasons to be cautiously optimistic about a sustained recovery. But there are nonetheless several factors preventing California from experiencing faster growth. The most serious problem is the skills mismatch in the labor market.

To be more specific, there is a real dichotomy between the skill sets of the workers in those sectors that were pummeled by the downturn and the skill sets required by the sectors that are leading California out of the recovery. On a proportional basis, construction, real estate, and retail trade were among the hardest-hit sectors in the region in terms of job losses. These sectors traditionally have low education requirements and pay relatively low wages, which are two of the predominant characteristics of our unemployed population.

California Unemployment by Industry
2010 Current Population Survey

Industry	Employed	Unemployed	Unemployment Rate (%)
Agriculture, forestry	395,361	209,439	34.6
Construction	1,137,637	244,155	17.7
Manufacturing	1,446,132	204,776	12.4
Wholesale and retail trade	2,395,685	392,817	14.1
Transportation and utilities	689,358	130,142	15.9
Information	482,804	60,392	11.1
Financial activities	1,078,028	115,255	9.7
Professional and business	2,003,732	116,383	5.5
Educational and health services	3,300,270	264,470	7.4
Leisure and hospitality	1,437,273	234,077	14.0
Other services	1,025,837	190,259	15.6
Public administration	636,122	31,106	4.7
Total	16,028,239	2,193,271	12.0

Source: National Bureau of Economic Research

The Annual Social and Economic Supplement to the Current Population Survey (CPS) allows us to examine the characteristics of the employed and unemployed populations in California. Given that the consumer-oriented and housing-oriented sectors suffered the most during the recession, it is no surprise to see that these sectors are exhibiting the highest unemployment rates in the state, while the sectors that have been performing relatively well have maintained much lower levels of unemployment. According to the 2010 statistics, the unemployment rates for construction, wholesale and retail trade, and the household sector (other services) are showing unemployment rates ranging from 14% to nearly 18%, which are much higher figures than the statewide average for all sectors.

On the other hand, education, and professional and business services are far below the state average, with unemployment rates in the single digits. If we want to plan for future growth, it is important to realize that the sectors with high rates of unemployment account for more than one-third of all the unemployed workers in California. Getting these folks back to work is a big part of bringing down California's unemployment rate—though this is much easier said than done.

California Unemployment by Education
2010 Current Population Survey

Education	Employed	Unemployed	Unemployment Rate (%)
Less than HS	1,923,102	409,726	17.6
High School	3,087,210	346,450	10.1
Some College	3,523,567	510,446	12.7
Bachelors Degree	3,774,069	317,492	7.8
Grad./Prof. Degree	1,838,829	100,481	5.2
Total	14,146,776	1,684,595	10.6

Source: National Bureau of Economic Research

In addition to letting us pull out unemployment statistics by industry, the Current Population Survey (CPS) also allows us to look at unemployment by education level, which highlights some important challenges that our state will face going forward. The most recent data for 2010 show that Californians with the lowest levels of educational attainment are being disproportionately affected by the downturn, while the most highly educated residents are maintaining "normal" levels of unemployment. More than 17% of all adults over the age of 25 who have less than a high school diploma were unemployed in 2010, compared with roughly 5% of all Californians with a graduate or professional degree. Not only do the less educated suffer from higher rates of unemployment, but they are a much larger group than Californians with graduate degrees. Residents without a college degree constitute more than 75% of the unemployed.

This situation represents a serious issue for both the short-term prospects and the long-run growth of California's economy. Earlier, we discussed some of the bright spots in the state's recovery, from trade in high-tech goods and intellectual property to new developments in biotechnology and software. California

is indeed adding jobs: more than 225,000 since late 2010; but almost half of these jobs have been in the professional and business services or education and health industries. It is very difficult to take advantage of growth in these sectors without a college degree. It's true that some of the jobs in administrative support and in education and health care do provide opportunities for those on the lower end of the educational-attainment scale. But for the most part, these industries are dominated by jobs that require some postsecondary training.

EDUCATION

Unfortunately, policy makers cannot wave a magic wand and grant every Californian a college degree. But that does not mean that we should ignore the skills mismatch that is currently bogging down the state's recovery and jeopardizing the long-run growth in sectors that, up to now, have been the centerpiece of California's "new economy." The current budget woes certainly do not make things any easier, but these simple statistics would suggest that we need more focus on education, not less.

Such a focus implies requiring better quality results from our K-12 system, which will require investments at a time when K-12 spending is on the chopping block. It also means that we will need to fill our universities with more Californians, even though the state can collect more money from out-of-state students. California needs to expand enrollments and provide more assistance to lower-income students. And not everyone wants or needs a four-year degree, which is why our community college system can play a critical role—especially over the short-run—in providing professional development opportunities in certificate or other training and retooling programs that would allow students to take advantage of the jobs that are in demand.

Accepting in-state fees and providing more financial assistance will strain the paper-thin budgets of the university system. And new and expanded community college programs will require new resources to be effective. But the costs of failing to make higher education available for California residents will be even more expensive in the long run if the state doesn't take steps to address these challenges today.

AGE AND TRAINING

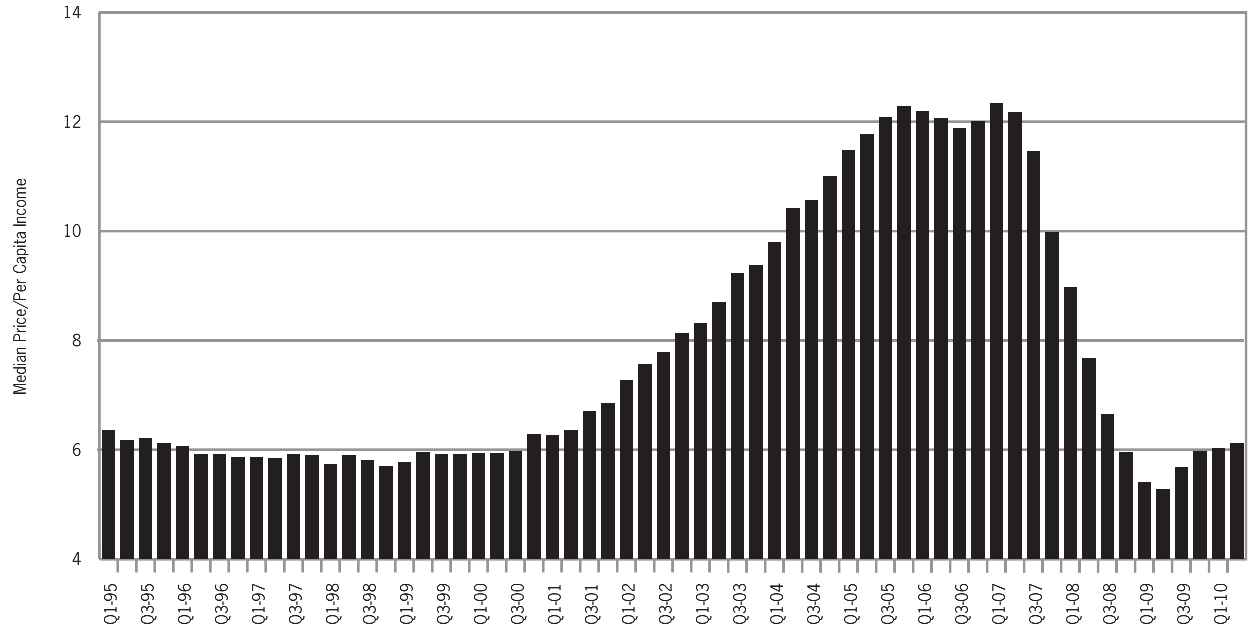
Roughly two out of five unemployed Californians are 35 years old or younger. For these folks, retooling and learning a new trade is well worth the investment relative to a lifetime of higher earnings. For the 56-and-over crowd, retooling can be a more challenging prospect. However, there will always be demand for lower-skilled workers in California. Although retail, construction, and real estate are not expected to lead the economic recovery, they will begin to add jobs eventually. California specifically has a long-term need for additional housing units given that we have one of the lowest housing vacancy rates in the nation. And California's idyllic climate and treasure trove of destination spots will ensure that it continues to draw tourists from around the world, which will create increased demand for the retail, and leisure and hospitality sectors. However, if we do not address the skills mismatch, then the healing process will take that much longer and the ability of California to thrive in a knowledge-based economy will be hampered.

California Unemployment by Age 2010 Current Population Survey

Age	Employed	Unemployed	Unemployment Rate (%)
25 or Less	2,221,619	522,260	19.0
26 to 35	4,112,447	371,910	8.3
36 to 45	3,454,542	545,583	13.6
46 to 55	3,503,335	492,566	12.3
56 to 65	2,095,266	209,710	12.3
66+	655,150	51,240	7.3
Total	16,042,358	2,193,271	12.0

Source: National Bureau of Economic Research

Housing Affordability Forecast

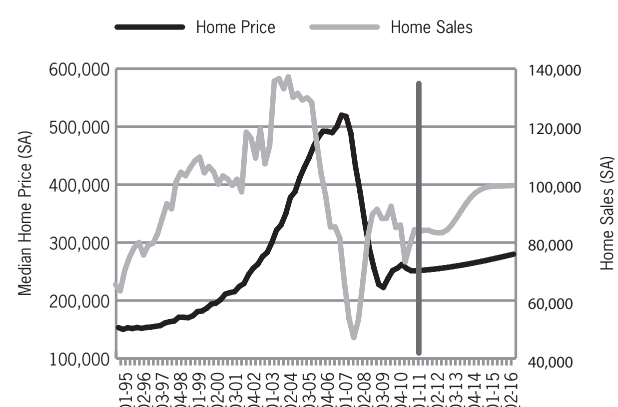


FORECAST HIGHLIGHTS: HOUSING AND CONSTRUCTION

As emphasized earlier, the outlook for California remains positive at this writing. Housing is prime example. Despite the precipitous decline in home values when the housing bubble burst, California's housing market was healthier as of mid-2011 than it had been in several years. Home prices have been driven primarily by incomes in the state, averaging between six and seven times per capita income over the last several decades. It's important to note that this ratio is skewed somewhat by the inclusion of non-homeowners, who traditionally drive the per capita income figures downward.

Still, this ratio was confined to a relatively stable range from the mid-1970s through the turn of the century. During the housing bubble, home prices shot up to more than 12 times per capita income—a level that was clearly unsustainable. As painful as the downturn in prices has been for many Californians' individual balance sheets, home prices have returned to a level that makes sense.

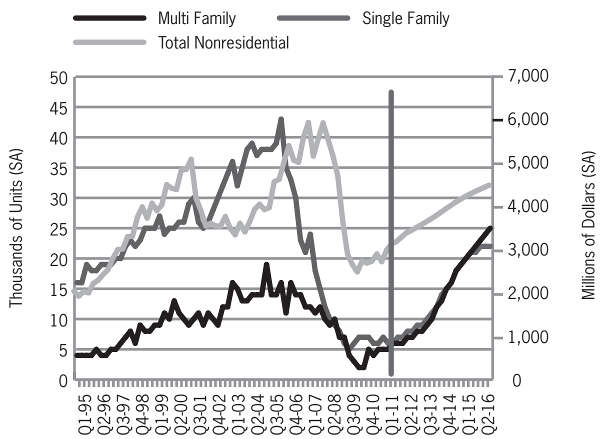
Housing Market Forecast



As a result, Beacon Economics is forecasting that home prices will begin to grow slowly, but that growth will be tepid at best. In 2012, we will see home price appreciation

accelerate gradually, rising by between 1% and 2% on a year-over-year basis. The affordability of homes and a slowly healing labor market will drive sales higher next year, averaging roughly 80,000 sales per quarter before climbing into the 90,000 range by late 2013.

Construction Market Forecast



New home construction will need to wait awhile before growth begins in earnest. Yet here, too, there are reasons for optimism. Both defaults and foreclosures have been trending downward for several quarters. They remain elevated, but the market is being allowed to reabsorb these units as both rental housing and ownership housing.

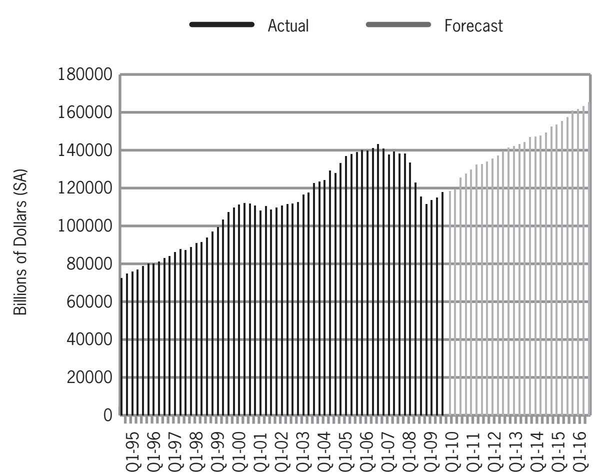
As this inventory is processed through the system, there will be a demand for housing in the state. According to the latest data available from the U.S. Bureau of the Census at this writing, California has one of the lowest housing vacancy rates in the nation at 5.9% for renters and 2.3% for homeowners. Thus, unlike other states—such as Florida, Nevada, and Arizona, which overbuilt during the bubble—California does not have enough underlying housing. As the distressed properties are cycled back into the market and as the economy continues to heal, new households will begin forming at a faster pace.

This trend will lead to additional residential permits and construction in the coming years. Beacon Economics is forecasting that by 2013, California should see permitting increase, ranging from 80,000 to 90,000 permits for new units per year. That increase will create some much-needed construction jobs in the state, but patience will be critical as the remaining problems left over by the downturn work their way through the market.

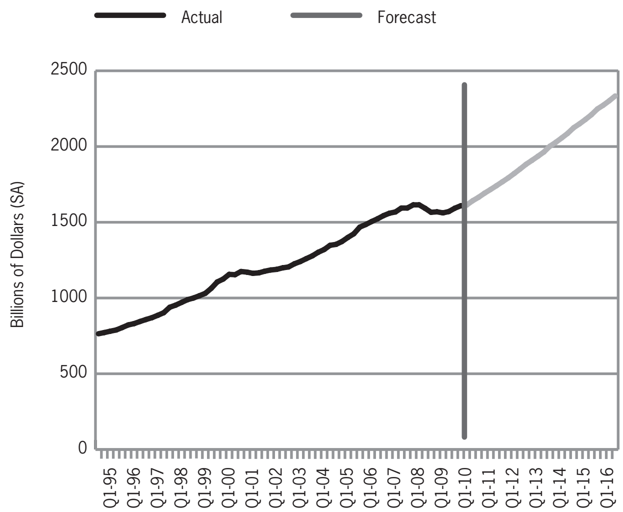
FORECAST HIGHLIGHTS: CONSUMPTION AND INCOME

On the consumer side, the numbers will continue to improve. Personal income has already begun to rise and has surpassed its previous peaks after turning the corner in late 2009. On a per capita basis, incomes are improving as well. Based upon updated population figures from the 2010 census, Beacon Economics estimates that per capita income is above $44,000 at this writing. Rising incomes, combined with healthier balance sheets on the part of households, have already driven solid increases in taxable sales. Through the first quarter of 2011, taxable sales had added back more than 14% of their 2009 trough. By 2013, taxable sales will exceed the previous peak and will see their growth accelerate through the end of our forecast period in 2016.

Taxable Sales Forecast



Personal Income Forecast



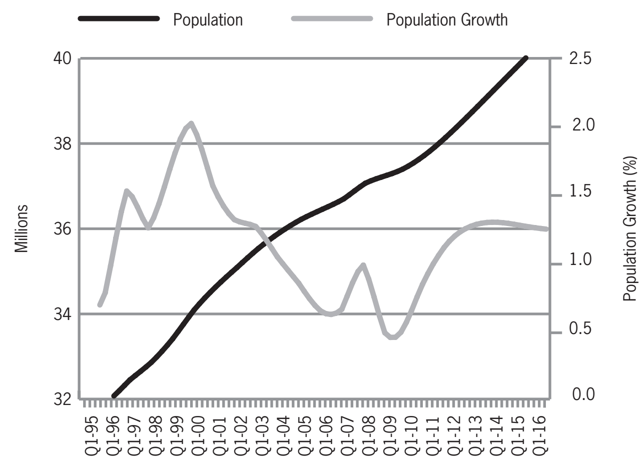
FORECAST HIGHLIGHTS: POPULATION

California's population is expected to see continued growth. Traditionally, California experiences significant downward pressure on population growth during times of economic turmoil as potential new residents forego a move to the state due to high levels of unemployment. Our own residents can also be attracted to neighboring states in hopes of finding better opportunities.

This time around, however, the recession was broad based, both across sectors and across geographies. As such, the incentive to move has been moderated by the fact that labor markets in many other states are lagging—especially those of our closest neighbors in Nevada and Arizona. And, with home affordability at very high levels, due to both low home prices and relatively low interest rates on home mortgages, the timing has never been better for California to attract new residents from the rest of the U.S. and around the world.

Therefore, Beacon Economics is forecasting that California will see its population continue to rise as the economy heals. We expect the state's population to increase by between 1% and 1.3% per year moving forward. This growth will be driven in part by new migration into the state as well as by natural increase from our existing population. By 2016, Beacon Economics forecasts that the total population in California will breach the 40 million mark for the first time.

California Population Forecast



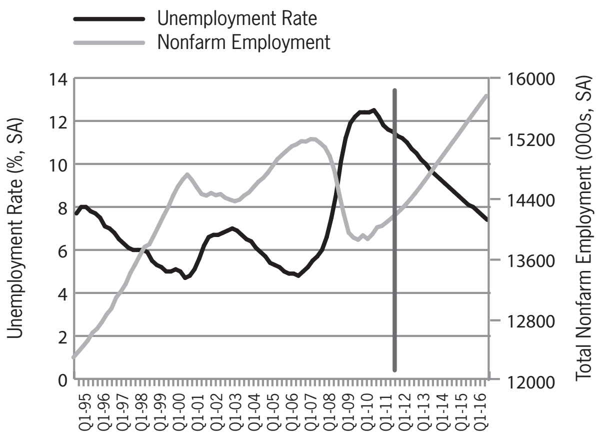
FORECAST HIGHLIGHTS: THE LABOR MARKET

Unfortunately, the speed of the labor market recovery will continue to disappoint. There's no doubt that the recovery is underway: we see it in the leading indicators of employment, from unemployment insurance claims to weekly hours to employment itself, which is up by more than 225,000 jobs at this writing, since hitting bottom. However, the pace of the jobs recovery will be slow. Part of this sluggishness is due to gains in productivity and efficiency; employers are currently in a mode of maximizing returns on their existing workforce.

Yet, an even bigger longer-term issue is the skills mismatch that is stifling job growth in the state.

Eventually productivity growth will slow, which will give rise to new positions, but the more difficult task will be placing relatively less-educated workers into jobs in growing industries because those workers simply don't have the requisite skill set. California employers are hiring, but the jobs have been concentrated in the highly skilled industries.

Labor Market Forecast



Beacon Economics is forecasting that the California labor market will continue to improve, but that the pace of the recovery will be slow. We expect that there will be a slight acceleration in job growth to nearly 2% in 2012. The labor market will continue to gain steam in 2013, and we expect it to surpass its previous peak of more than 15 million jobs by 2014.

Unemployment will begin to come down gradually as well. Although it is expected to remain in the double digits through the end of 2012, the unemployment rate should drop into the 9% range by 2013. Still, it will be several years before the state gets back to "normal" levels of unemployment, and that could be a relatively higher baseline of 7% if we cannot find a way to address some of the structural problems with our workforce. For many workers, even in the face of recovery in key industries in California, the Great Recession will linger.

ENDNOTES

1 Graham, Matthew, “Case-Shiller Data Confirms Double-Dip in Home Prices,” Mortgage News Daily, May 31, 2011, http://www.mortgagenewsdaily.com/05312011_case_shiller.asp.

2

REALLY! NO MENTAL RESERVATIONS:

JERRY BROWN INHERITS CALIFORNIA'S BUDGET CRISIS

DANIEL J.B. MITCHELL

Professor-Emeritus, UCLA Anderson School of Management and UCLA Luskin School of Public Affairs.

2

Justice Tani Gorre Cantil-Sakauye (administering oath of office): …that I take this obligation freely…

Governor-Elect Jerry Brown…that I take this obligation freely…

Cantil-Sakauye: …without any mental reservations.

Brown: …without any mental reservations.

(Laughter from audience)

Brown: ...Really! No mental reservations!

The April 23, 2011 edition of the *Economist* magazine devoted a large section to California under the title "Where it All Went Wrong."[1] Its answer to the question was the state's direct democracy (initiative, referendum, and recall) system. Initiatives in particular were the villain, producing ballot-box budgeting formulas that hamstrung the legislature. Especially after the passage of Prop 13 in 1978—the initiative that dramatically cut property taxes and imposed a two-thirds vote for tax increases—so the narrative went, direct democracy in California had gone mad.

At around the time the edition appeared, the *Economist* co-sponsored a public forum at UCLA on the subject of California's dysfunctional government in which the thesis of runaway direct democracy was again put forth. While other panelists went along with the thesis, this author thought the matter was more complicated. It is certainly possible to show the contribution of direct democracy to California's fiscal problems. However, the gridlock and inability to pass a budget in an orderly fashion also characterize the U.S. Congress, although there is no direct democracy and no Prop 13 at the national level.

If there is communality of dysfunction at the U.S. and California state levels, it is party polarization and a need for a supermajority vote on critical issues.

Polarization is not a function of direct democracy. At the U.S. level, the supermajority hurdle exists due to Senate rules, not because of something imposed directly by the voters. At the state level, supermajority hurdles *are* related to direct democracy. But—as it turned later—direct democracy in California had (partially) made a self-correction. Voters ended the two-thirds vote requirement to pass a state budget in November 2010. As it turned out, that change allowed a new state budget to be enacted—after an initial failure—before the fiscal year 2010-11 expired.

In this chapter, we examine both the underlying problems in budgeting in California and the events that produced the 2011-12 budget. In earlier editions of *California Policy Options*, I have traced California budget woes over the years. And indeed, there is no single starting point for those woes since each budget year sets the preconditions for the next. However, in *California Policy Options 2011*, we took the budget tale up through the (much-delayed) passage of the 2010-11 budget, stopping shortly before the gubernatorial election of 2010. After some background on the budget process and its history, I will pick up the story from that point, stopping this time shortly after the 2011-12 budget was enacted and signed.

UNDERLYING CAUSE OR INSTITUTIONAL ARRANGEMENTS?

"*…What is unique about California is not its set of challenges…which differ in scale but not in kind from those elsewhere. It is its brand of democracy…*"

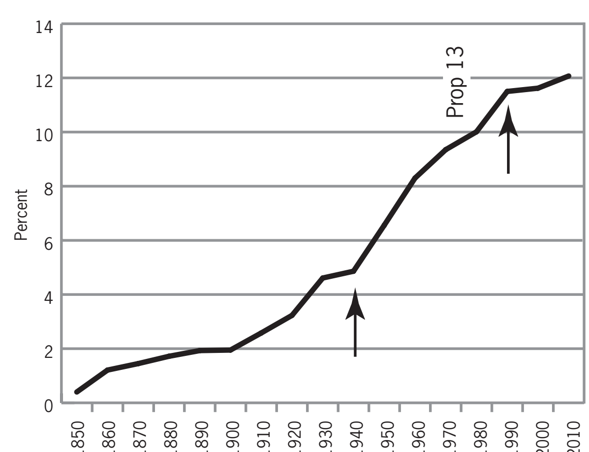
—Economist magazine[2]

It is easy to point to direct democracy—as the *Economist* did—as a factor in California dysfunction. At a fundamental level, since there is an alternative route to lawmaking without going through the legislature, the legislature is inherently weakened—since it can be bypassed and checked. Most of what a governor wants to accomplish requires legislative agreement and action—governors have more often than not been unsuccessful in using initiatives to bypass the legislature. So a weak legislature produces a weak governor.

However, particularly with regard to budgeting, what is occurring in legislating is allocating resources. Allocating resources is easier when the economic pie is growing rapidly. Rapid growth translates into rising tax receipts. In that context, allocating more money to program A does not require reducing program B by that amount or raising tax rates.

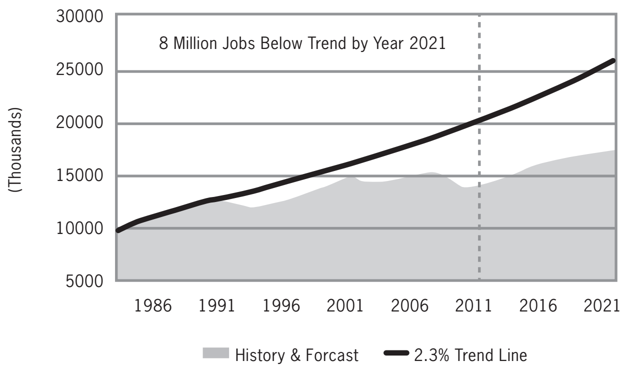
Figure 1 shows California's population as a proportion of the U.S. population. Generally, California has grown faster than the U.S. since statehood by that measure. But there are two obvious inflection points. After 1940, California's rising share of the U.S. population accelerates. After 1990, it decelerates. The period after 1940 marks the jump in federal military expenditures in California connected with World War II, the Korean and Vietnam Wars, and the Cold War. The year 1990 marks the end of the Cold War.

Figure 1: California Population Relative to US



Source: U.S. Bureau of the Census.

Figure 2: California Nonfarm Employment History & Forecast Vs. 2.3% Trend from 1990:3



Source: UCLA Anderson Forecast, June 2012.

Figure 2—a regular feature from the UCLA Anderson quarterly economic forecast publication—shows the old rapid trend of employment growth and California's departure from that trend after 1990. Even the dot-com boom of the late 1990s and the housing/mortgage boom of the mid-2000s do not close the gap between the old trend line and the actual outcome. In a sense, California has never recovered from the recession of the early 1990s, but no one has told the electorate. Perhaps California political leaders also need to be informed that the rapidly-growing pie they used to have for allocation no longer exists. In any event, fiscal institutions that worked tolerably well in the context of rapid expansion came under strain when Harder Times arrived.

A LOOK AT THE NUMBERS

"That's the art of politics. You can't win everything."

—Governor Arnold Schwarzenegger commenting on the October 2010 budget deal[3]

Chapters on the state budget in prior editions of California have traced the ups and downs of the state budget during the 2000s. **Table 1** uses the cash statements of the state controller to provide a brief summary. The state's General Fund can be thought of as a checking account in which funds are flowing in from deposits and out from expenditures. At any point in time, there is a balance in the account but in the case of the General Fund, the balance can be negative, i.e., the account can be overdrawn. At points during the year, because of seasonal mismatches between when revenue is received, mainly from taxes, and when expenditures are made, there can be an overdrawn account. In such cases, the state Treasurer may borrow externally short term (within the fiscal year) by issuing Revenue Anticipation Notes (RANs). Or there may be internal borrowing from various special funds outside the general fund.

Table 1: General Fund Debt, Cash, and Disbursements ($ billions or percent)

Year Ending June 30	Short Term Debt*	Cash Balance	Total Cash**	Disbursements	Debt as Percent of Disbursements
1998	$0	$0.9	$1.0	$53.1	0.0%
1999	0	0.8	2.1	58.6	0.0
2000	0	8.5	9.3	64.5	0.0
2001	0	3.4	3.6	83.5	0.0
2002	10.4	0.0	0.0	80.4	12.9
2003	11.0	0.4	3.0	78.7	14.0
First issuance of Economic Recovery Bonds* **					
2004	0	0.5	2.8	79.6	0.0
2005	0	6.4	7.2	82.0	0.0
2006	0	9.2	10.5	91.5	0.0
2007	0	2.5	4.1	104.1	0.0
Second issuance of Economic Recovery Bonds** **					
2008	1.5	0.0	0.9	107.3	1.4
2009	11.9	0.0	0.0	98.2	12.1
2010	9.9	0.0	0.0	86.7	11.4
2011	8.2	0.0	0.0	93.8	8.7

*Outstanding loans.
**Differs from cash balance by Special Fund for Economic Uncertainties (a "rainy day" fund maintained for the General Fund).
***Refinanced short term debt on a longer-term basis.
****Issuance of remaining authorized Economic Recovery Bonds allowing longer-term funding of short term debt.

Source: June cash reports of the State Controller.

When the account is overdrawn because of a longer-term problem than seasonality, there can also be internal borrowing. Essentially, an IOU is put into state other accounts. However, continually drawing from other accounts will eventually pinch whatever specialized service they provide. In relatively rare occasions, the state—through the state controller—can float Revenue Anticipation Warrants (RAWs) which provide borrowing from one fiscal year to the next. The interest rates the state has to pay on RANs and RAWs will vary with the risk of default that financial markets perceive. Ratings agencies—Fitch, Moody's, and Standard and Poor's—provide rating of risk on California financial securities.

The state constitution prohibits long-term borrowing for the kind of ongoing operating expenses which the General Fund encompasses. Such borrowing is essentially reserved for long-term projects such as infrastructure. The underlying concept is that projects that will provide service over a long period of time can (should) be paid for by users over that period. Even then, a vote of the people is required before General Obligation (GO) bonds—backed by the full faith and credit of the state—are issued. However, voters can also amend the state constitution to provide an exception, as occurred in 2004 after Governor Arnold Schwarzenegger took office in a 2003 recall election that replaced incumbent Governor Gray Davis.

Davis had come up with a plan to refinance state short-term debt through long-term borrowing which was intended to circumvent the constitutional limitations on borrowing and the requirement of approval by the electorate. It is doubtful that—given the legal cloud hanging over the Davis plan—it could have been successful. However, incoming Governor Schwarzenegger capitalized on his initial popularity and persuaded the electorate to approve the issuance of Economic Recovery Bonds under Props 57 and 58 of spring 2004. Most of these bonds were issued shortly after the election. But some remained authorized but not issued. Governor Schwarzenegger issued the remaining bonds in 2008 as part of the recurring budget crisis. Thus, there are three distinct periods of debt: Before the first Schwarzenegger bonds (through the 2002-03 fiscal year), after the first Schwarzenegger bonds until the second issuance (through the 2006-07 fiscal year), and the period since.

Table 1 traces the history of state debt in the General Fund from the late 1990s (during the dot-com boom) through fiscal year 2010-11 that ended June 30, 2011 with the three periods shown separately. The state built up a considerable cash reserve by 1999-2000 but at what should have been the peak of the cycle, began to pull down its cash (run a budget deficit). Running a deficit at the peak can only bring major problem at the trough which is what happened. Thus, although the ongoing budget problem was stabilizing at the time of the 2003 recall, the state faced the problem of dealing with a large short-term debt that needed to be rolled over at potentially high interest rates.

Once the special Schwarzenegger bonds were issued, thus refinancing the debt, and as the economy continued to recover from the 2001 recession/dot-com bust, the cash balance in the general fund rose. But much of the recovery in California was based on the housing/mortgage bubble which began to burst after 2006, and which shows up on Table 1 as a draw-down of cash during 2006-07. The housing/mortgage bust turned into a global financial crisis in 2008, leading to a state cash crisis and a build-up of general fund debt that peaked in 2008-09 and was reflected in the state's inability to pay all bills in summer 2009 and its issuance of IOUs (known as "registered warrants"). However, as will be discussed further below, the budget situation stabilized thereafter, thanks to a combination of budget cuts and temporary tax increases enacted by the legislature in February 2009.

FEBRUARY 2009, MAY 2009, AND THE LEGACY FOR THE NEXT GOVERNOR

"The current governor and prior governors have tried to bring people (in the legislature) together with little success."

—Neil Hokanson of Hokanson Associates wealth management[4]

Voters were offered the option of extending the temporary tax increases (income tax, sales tax, and vehicle license fee) in a special election in May 2009 but declined to endorse the extensions. The budget situation stabilized thanks to a variety of one-time fixes and cuts in 2009-10 and 2010-11. But that left a considerable debt in the General Fund to be financed—shades of the problem facing Governor Davis at the time of the 2003 recall. Unlike that situation, however, the Great Recession was followed by a very sluggish recovery and the specter of the expiring temporary taxes in 2011. Hence, whoever was elected governor in 2010 would have to deal with a budget crisis that was part financing and part the threat of new deficits.

Table 2 shows the credit ratings of California General Obligation bonds by the three major credit rating agencies. Ratings were generally upgraded after the first Schwarzenegger bonds were issued and the budget picture and the state economy generally improved. In 2009, however, the budget situation deteriorated again and California's rating fell to the lowest of any state. Since that time, no substantive changes were perceived by the rating agencies although two of them "recalibrated" all of their municipal bond grades, in part due to complaints of excessive negativity in ratings of the public versus the private sectors.

Table 2: California General Obligation Bonds Credit Ratings

	Fitch	Moody's	Standard & Poor's
Prior Rating	A (July '05)	A2 (May '05)	A (Aug '04)
May 2006		A1	A+
June 2006	A+		
Feb. 2009			A
Mar. 2009	A	A2	
July 2009	BBB	Baa1	
Jan. 2010			A-***
Apr. 2010	A-**	A1**	

*Prior rating is the rating that existed before 2006. Date in parentheses is the date that rating was first determined.
**Fitch and Moody's "recalibrated" their municipal bond ratings at this time and indicated the change in their ratings did not reflect an improvement in quality.
***After the 2011-12 budget was passed, S&P classified it's A- rating as "stable" on July 7, 2011.

Note: The three agencies use different letter grades. For Fitch, in descending order of quality: AAA, AA, A, BBB, BB, B (with plus and minus grades as shown). For Moody's: Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C (with numerical add-ons as shown). For Standard & Poor's: AAA, AA, A, BBB, BBB-, BB+, BB, CCC, CC, C, D (with plus and minus grades as shown).

Source: California Treasurer website: http://www.treasurer.ca.gov/ratings/history.asp

THE LEAD-UP TO THE 2010 GUBERNATORIAL ELECTION

"Polls schmolls. The only poll that really matters is the poll on Election Day."[5]

—Gubernatorial candidate Meg Whitman a few days before November 2010 election

Although the gubernatorial election was not exclusively about the budget, the ongoing budget crisis remained in the background as a symptom of government dysfunction. The fact that a budget for 2010-11, which was supposed to begin on July 1, was not adopted until

October reinforced the sense of gridlock in Sacramento. Easy and grossly misinformed comparisons were often made between the near-bankrupt country of Greece and California, although bond rating agencies did not endorse the supposed analogy.[6]

There never was much of a gubernatorial contest in the Democratic side. For a time, Gavin Newsom, then-mayor of San Francisco, tried to run but never seemed to make a dent in the frontrunner, attorney general and former governor Jerry Brown. Brown didn't seem to have to do anything to be the frontrunner. Newsom eventually switched to the Lieutenant Governor race (and won the nomination and the general election). There was talk about Los Angeles mayor Antonio Villaraigosa running for governor. But he never did, in part because his municipal budget problems did not create confidence that he could meet the state's fiscal challenge.

The Republican contest was decidedly more heated. Former eBay chief executive, Meg Whitman—with seemingly unlimited self-funding—made herself the frontrunner in the primary, running against state insurance commissioner Steve Poizner, another former Silicon Valley executive. For a time, Tom Campbell, former UC-Berkeley and Stanford academic, former congressman, and former budget director under Governor Schwarzenegger, was also in the race. But unlike Whitman and Poizner, he had little funding and eventually switched to the U.S. senate race (and lost in a three-way contest in the Republican primary).

Whitman positioned herself as a non-politician outsider and promised business-type solutions—and no new taxes—to the state budge. That was an approach that had worked for Arnold Schwarzenegger in the 2003 recall when he defeated career politician and incumbent Governor Gray Davis. Indeed, Whitman went further than just a no-new-tax pledge and favored eliminating the capital gains tax. But by summer 2010, Schwarzenegger's poll ratings had fallen to roughly those of Davis at the time of the recall. So emulating Schwarzenegger's 2003 approach—even while distancing herself from Schwarzenegger, the man—was problematic.

One of Brown's more effective TV ads reminded voters of the similarity in approach of Whitman and Schwarzenegger. The ad was later dubbed the best negative ad in the country by a *Washington Post* columnist.[7] Conservative Republicans—particularly upset that Schwarzenegger had okayed a tax-raising deal in February 2009 with the legislature—depicted a Whitman victory as just a *de facto* third term for Schwarzenegger. On the influential Los Angeles area "John and Ken" talk radio show, Whitman received an unfriendly grilling while Brown was treated surprisingly gently.

Meanwhile, there was an undertow of bad personal publicity about Whitman. Whitman had had some kind of altercation with another executive at eBay and had to pay damages. Negative stories about obnoxious behavior by her sons circulated on the Internet on sites such as Gawker. Questions about excessive executive pay she received were raised. But what seemed to do the most damage was the so-called housekeeper-gate affair.

Whitman had fired her housekeeper in a reportedly nasty fashion when it came to light the housekeeper was an illegal immigrant. Prominent attorney Gloria Allred brought legal action related to the firing and the tearful housekeeper appeared on a TV news conference.[8] Up to that point, polls had suggested Whitman and Brown were tied in the race. After the affair broke, Brown moved ahead, particularly after Whitman—who was forced into a tough, but not always consistent, anti-illegal immigration stance in the primary—said on Fox News that her housekeeper should be deported. As former GOP state senate leader Jim Brulte said after Whitman's election loss, "I don't know how you can be a billionaire, say someone is

part of your family, fire her, and not even give her enough severance… or at least (not) hire a lawyer to help her."[9]

Brown pointed to his past experience as governor (1979-83) in a selective manner, emphasizing his experience in dealing with the political institutions of the state. He did not point to the major budget crisis he left to his successor, George Deukmejian, although older voters apparently remembered and tilted toward Whitman.[10] On taxes, he promised there would be no new ones *without a vote of the people* (an important proviso).

Rather than provide specific budget solutions, however, Brown emphasized process. He would work out a bipartisan budget deal with the legislature using knowledge that only a longtime California politician could have. Whereas Whitman explicitly pushed for moving away from defined-benefit pension plans for public employees—noting the underfunded status of such plans in California—Brown simply said he would work on some kind of pension reform.

While Whitman was left to deal with housekeeper-gate shortly before the election, Brown didn't have any diversions of that magnitude. The closest he came was "whore-gate," an episode in which he had left a voicemail message for an unfriendly union official and did not hang up, thus leaving a recording of a subsequent political conversation among his advisors on the machine. Someone—not Brown—called Whitman a "whore" in that conversation for favoring retaining defined-benefit pensions for police in contrast with other public workers. The suggestion was that she had done so to obtain endorsements from police unions.[11] But since it was never clear who said it, and since the reference in fact did emphasize Whitman's contradictory exemption of police from her pension policy, whore-gate quickly faded while housekeeper-gate stuck.

Ultimately, opposing Brown and promoting the whore-gate affair was seen as a blunder by the union involved and its chief political consultant. "I'm like Casey at the Bat; I stuck out," said the union's advisor.[12] But most other unions had backed Brown and felt they had an "in" with the governor.

That position was less clear for the business community, which generally had supported Whitman. In particular, the California Chamber of Commerce had run an ill-disguised attack ad on Brown on TV in the spring of 2010, leading to an outcry and a quick pulling of the ad. "That's in the past," the Chamber's president said, hopefully, in December 2010 after the election, although it was not clear that all was immediately forgotten or forgiven.[13] However, the Chamber had favored the unsuccessful tax extension measure in May 2009. It similarly gave general support to the idea when Brown as governor tried for a second extension measure in 2011. Brown termed the Chamber's position in 2011 as "forthright and positive."[14]

In the end, Whitman—after a campaign expenditure estimated at $177 million—lost badly to Brown (who spent $36 million), pulling in fewer votes than an initiative—Prop 19—legalizing marijuana, which also lost.[15] Eighty-one percent of Whitman's spending was self-financed. (Election results are summarized on **Table 3**.) Despite a national shift toward Republicans, California voters produced a Democratic sweep of all statewide offices and re-elected U.S. Senator Barbara Boxer to another term.[16] Whitman largely disappeared from public view for several months after the November 2010 election. But she was quoted in mid-April 2011 as suggesting that she had come to believe that the "immigration discussion" was "not helpful" for Republicans.[17]

Table 3: November 2010 Election Results (percent of votes in favor)

Prop 19:	Legalize marijuana	46.5%
Prop 20:	Independent commission to redistrict congressional seats*	61.3
Prop 21:	$18 tax on vehicles for state parks	42.7
Prop 22:	Prohibit state from taking (borrowing) various local agency funds including transit agencies	60.7
Prop 23:	Suspend AB32 (greenhouse gas law)	38.4
Prop 24:	Repeal business tax breaks enacted as part of Feb. 2009 budget deal	41.9
Prop 25:	Simple majority vote (instead of 2/3) to pass state budget	55.1
Prop 26:	2/3 vote for fee increases & retaining fuel tax swap of 2010-11	52.5
Prop 27:	Kill independent redistricting Commission*	40.5
Jerry Brown for governor		53.9
Meg Whitman for governor		40.9

*An earlier proposition passed in 2008 created an independent redistricting commission charged with redistricting the legislature, not state congressional districts, after the 2010 Census became available. Prop 20 added congressional districts. Prop 27 would have terminated the commission and returned redistricting to the legislature.

Source: California Secretary of State, *Statement of Vote, November 2, 2010 General Election*, revised January 6, 2011, http://www.sos.ca.gov/elections/sov/2010-general/complete-sov.pdf

Although legalizing marijuana lost (in spite of claims that legalized marijuana could be a tax source for the state), voters approved other budget-related measures. They tightened up the tax vs. fee distinction, making it more difficult to raise revenue via the latter, under Prop 26. Covered fee increases would now require the same two-thirds vote that tax increases already required. In contrast, an initiative (Prop 21) that would have imposed a car tax to support state parks (and provided free entrance to parks by California cars) was defeated.

An attempt to repeal certain business tax breaks (Prop 24) that were part of the February 2009 budget deal also failed with voters. Another proposition (Prop 22) made it more difficult to dip into revenues of local entities such as transit districts and redevelopment agencies. As it turned out for the latter agencies, Prop 22 morphed a few months later into a case of be-careful-what-you-wish-for, an outcome to be discussed below.

Republicans interpreted these actions of the electorate in November 2010 as a continuing voter anti-tax mood. On the other hand, voters changed the two-thirds requirement to pass a budget—a requirement that went back to the Great Depression—to a simple majority under Prop 25. In effect, the Democratic majority could pass a budget without Republican support, *so long as no tax increases were included* (a major limitation). A failure to pass a budget by the constitutional deadline of June 15 would result in forfeiture of legislators' pay (not just a delay in pay) for each day beyond the deadline. The combination of Brown's political pledge that any tax increases would require a vote of the people, the remaining two-thirds vote hurdles on taxes and fees, and Prop 25 were to become the major ingredients in the eventual tax deal of June 2011.

TAX BACKGROUND

"…We just have to get those tax extensions because the alternative is not pretty."

—Governor Jerry Brown soon after a self-imposed deadline for putting tax extensions on the ballot had come and gone[18]

"If somebody was designing a tax system from scratch, it's a good bet it wouldn't look like what we have today. Practically nothing in California politics is by design."

—Professor Jack Pitney, Claremont-McKenna College[19]

Much controversy surrounds California taxes and their comparison with those of other states. During the 2011 budget discussions, Texas was often brought in for comparison on the grounds that its taxes were attracting jobs. California was depicted—especially by Republicans—as a high tax state that was losing jobs as a result.

Figure 3: Own State & Local Tax Rate Per Dollar of Personal Income (percent)

Note: US tax rate refers to average state and local taxes across all states and does not include federal taxes.

Source: Chart based on Tax Foundation data. See text and notes for details.

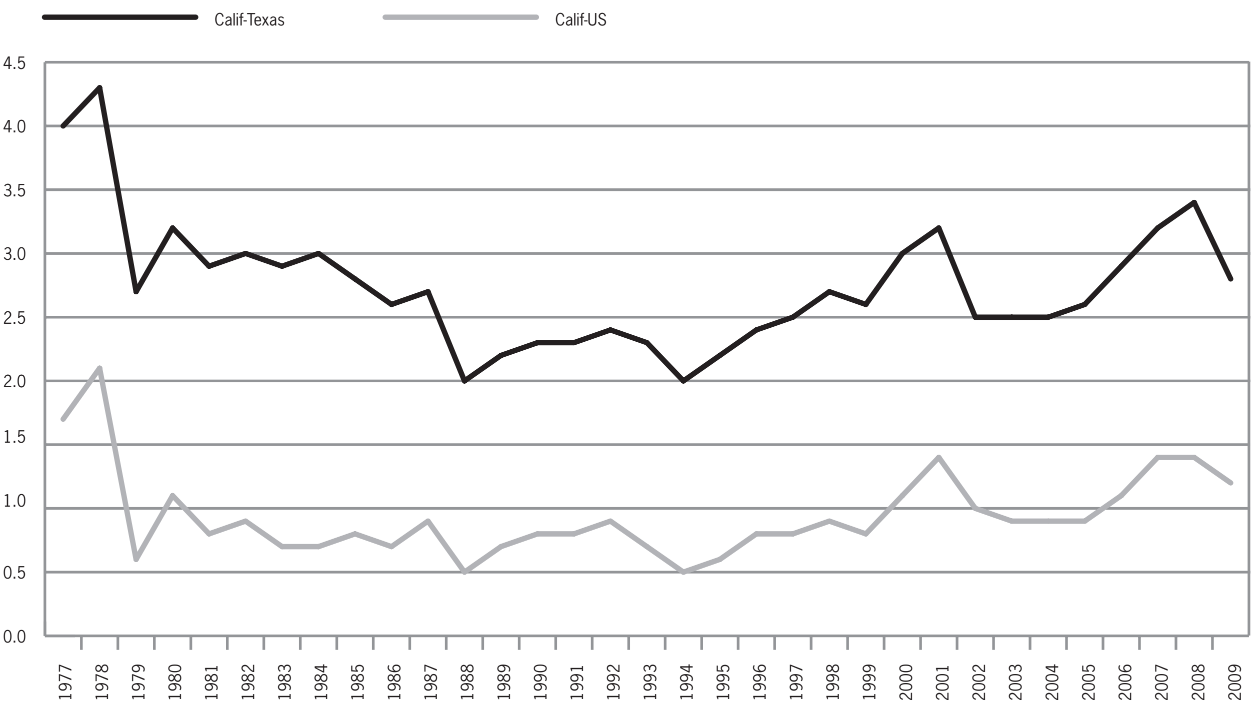
Figure 3 shows that, indeed, California state and local taxes as a percent of personal income are somewhat higher than the national average and notably higher than those of Texas.[20] (Comparisons across states must be made on a state-*and-local* basis since the division of responsibility for funding and providing particular services such as education varies across states.) On the other hand, as **Figure 4** illustrates, the gap between Texas and California state and local taxes by that same measure has not changed much over time.

Finally, **Figure 5** indicates that California state and local taxes on a per capita basis run about 30% above the national average while Texas state and local are about 30% below that average. Texas is definitely a low-tax/low-public-service state. California has higher taxes but its appetite for services tends to exceed its revenue base.

It should be stressed that these measures are all based on averages, not on marginal tax rates. Economic theory suggests that decisions by individuals or firms about where to locate are likely to be based on importantly on marginal rates. In addition, there is an intangible factor of tax stability. If the tax code is constantly in flux—which can happen if there are chronic budget crises—it becomes difficult for businesses to plan.

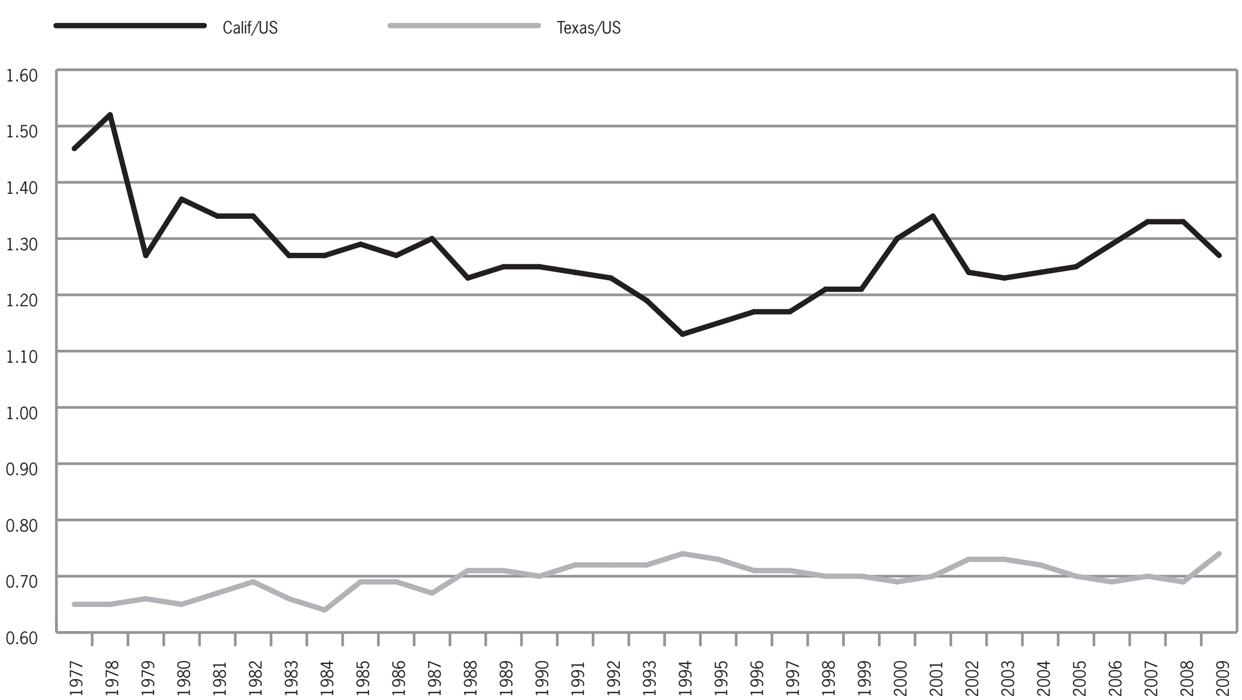
Two features stand out from these charts concerning California taxes. First, the big drop in taxes after Prop 13 was passed in 1978 is apparent. There is some erratic upward creep in California taxes over the period shown but not back to the pre-Prop 13 levels. Second, the impact of California's heavy reliance on the progressive income tax (in part because of its lesser reliance on

Figure 4: Own State and Local Tax Rate Gap: California vs. Texas and California vs. US (percentage points)



Source: Chart based on Tax Foundation data. See text and notes for details.

Figure 5: Own State & Local Taxes in Per Capita Dollars vs. US Per Capita Average (ratio)



Source: Chart based on Tax Foundation data. See text and notes for details.

property taxes after Prop 13) shows up in the variability and timing of the ups and downs of California taxes. California is heavily dependent on the fortunes (and misfortunes) of higher-income taxpayers. The dot-com/stock boom of the late 1990s is clearly visible in the form of an upward jump in the California measures. The housing boom of the early-to-mid 2000s is similarly visible. In contrast, Texas has no income tax so when there is a burst of personal income in that state, its revenues as a percent of personal income tend to fall.

As noted earlier, there was a major turning point for California when the Cold War ended and employment fell. The drop off in federal military spending in the state corresponds to the longer term slowdown in the state's growth relative to the rest of the U.S. The California-Texas tax gap was present when California was growing rapidly during the Cold War but also present afterwards. For that matter, the taxpayer revolt surround Prop 13 was not based on popular concern about employment trends—that is a more contemporary argument. The issue at the time of Prop 13 was the tax burden itself and a sense that rising property taxes were not producing a corresponding jump in the quality of state and local services.

HOW NOW, BROWN GOVERNOR?

"*It's very fortunate when I had no primary opposition… And then, of course, you have my sparkling personality.*"[21]

—Governor-elect Jerry Brown explaining his victory the day after Election Day

"*(The budget situation) is certainly as bad as anyone—as it's ever been.*"[22]

—Governor-elect Brown after meeting with Department of Finance officials

By constitutional mandate, governors must deliver a state-of-the-state message and produce a budget proposal in early January. For incoming governors, the challenge is especially daunting since new staff must be hired and brought up to speed between Election Day and January. Brown began his preparation by meeting with Department of Finance staff and soon reappointing Governor Schwarzenegger's finance director Ana Matosantos. He undertook symbolic steps such as rejecting the usual provision of rented office space normally given to governors-elect for the transition. That move was a throwback to his previous governorship in which he rejected living in what was then a newly-built governor's mansion.

But while the transition was going on, other budget-related events were occurring. The University of California (UC) Regents raised tuition despite student protests and UC recruitment of out-of-state students (who pay higher tuition than residents) continued. Litigation—mainly unsuccessfully—challenging state employee furloughs invoked by Governor Schwarzenegger continued. Court decisions and/or litigation challenging this or that budget cut proceeded. Various state unions agreed to concession deals, reducing state payroll costs. Governor Schwarzenegger, despite his lame duck status, called

a special session of the legislature to deal with the budget. The Schwarzenegger administration also pursued its (extremely dubious) plan to sell state office buildings and lease them back (a kind of high-cost loan).[23]

Meanwhile, weak market demand for California state securities led to a cancellation of a planned bond offering. And voter attitudes remained contradictory. In the abstract, voters say they favor spending cuts rather than tax increases when polled. But when asked what to cut, the only category toward which voters tilt is prisons—presumably because voters' concept of prison spending is coddling criminals. Yet federal courts have been pushing the state to spend *more*, not less, on prisons—which account for about a tenth of the general fund—and/or to release prisoners if more is not spent.

One problem is that issues that state politicos think are important are not the major preoccupation of the electorate, although, of course, voters express themselves by voting on who and what appear on the ballot. In a poll undertaken shortly after the November 2010 election, voters were asked what they thought was the most important issue facing the state. Sixty-four percent said it was "jobs, economy" while only 13% said it was "state budget, deficit, taxes."[24] These poll results are consistent with others taken in the aftermath of the Great Recession. It is often said, for example, that voters in California are very concerned about education. But the same poll indicated that 4% thought "education, schools" was the most important issue.

To try and focus public attention on the budget, Governor-elect Brown, State Treasurer Bill Lockyer, and State Superintendent-elect of Public Instruction Tom Torlakson went on a road show complete with PowerPoint charts and graphs on fiscal matters. How much public attention was paid to the details on the charts and graphs, however, is open to question. A public opinion poll in January showed that the usual contradictions and confusions over the budget remained untouched. When asked what they would like to cut, seventy percent said "prisons and corrections." No other category received even close to a majority.[25]

Meanwhile, outgoing Governor Schwarzenegger's special legislative session on the budget opened in early December. It is noteworthy, however, that his proposals to the legislature were mainly cuts. They did not include extending the expiring temporary taxes that became the centerpiece of Governor Brown's initial budget proposals after he took office.

As a lame duck with only a few weeks in office to go, and with low popularity rating, Governor Schwarzenegger's proposals were not really considered seriously. A former Schwarzenegger finance director conceded in an op-ed defending the governor's budgetary record that the structural fiscal problems the governor had inherited had not been resolved.[26] As his term came to an end, Governor Schwarzenegger dealt with budget-related political debts, appointing two GOP assemblymen to state commissions; both had paid heavy political prices for going along with the governor in February 2009 on temporary tax increases.[27]

But he also reduced the prison sentence of the son of former Assembly Speak Fabian Núñez who had been convicted of murder, creating a mini-scandal.[28] In an interview shortly after leaving office, Schwarzenegger indicated that his wife and children broke into tears when his gubernatorial work schedule kept him in Sacramento and away from his family.[29] But a still larger scandal developed later when it came out that Schwarzenegger had fathered a child by a domestic servant in his household, unbeknownst to his wife who subsequently started divorce proceedings.

In seven years, Schwarzenegger—elected in the 2003 recall largely due to the budget crisis of that era—had

gone from Terminator to Governator to Inseminator in the public mind. At the end of his term, the departing governor posted a Twitter video of him walking out of his office and turning off the light and essentially disappeared from the California political scene. State Treasurer Bill Lockyer, a Democrat who—at the time of the recall indicated he had voted for Schwarzenegger—said that in retrospect "I guess I should have just abstained entirely, said nothing, (except) just stick with Gray (Davis)."[30] His musing seemed to be a more general public sentiment. But that sense of public regret would not solve the budget problems facing the governor-elect.

MOVING TOWARD SPECIFICS

"I'd say he thinks like more of a visionary and I'm more 'let's make sure every train is running on time…'"

—Anne Gust, wife of Governor-elect Jerry Brown explaining her role as unpaid gubernatorial advisor[31]

"The next step is serious public conversation with the people of California about what they want from their government, what they expect and what they are willing to pay for."

—Governor-elect Jerry Brown[32]

Whatever the changes in politics and public opinion were in the aftermath of the November election, the specifics of a budget proposal had to be formulated quickly. There were the usual uncertainties about the direction of the economy and other contingencies. For example, the issue of state prison overcrowding was argued before the U.S. Supreme Court soon after the election. The Court's eventual decision would have a fiscal impact but no one could know for sure what that decision or impact would be. As governor, Jerry Brown characterized the Court's eventual decision as a "sword of Damocles" hanging over the state budget.[33] An appeal by the state on revenues from Indian gambling was also before the Supreme Court. And there was still some residual litigation over state worker furloughs that had been imposed for budget reasons by the Schwarzenegger administration. Generally, the state had been successful in past litigation in defending these furloughs but some questions remained, particularly in the case of employees in agencies who were not paid from the General Fund. Furloughs functioned as a bargaining chip the state had with its unions in negotiating other contract concessions under Governor Schwarzenegger.[34] Generally, his furloughs ended in calendar 2011 but were replaced by "personal leave days" which had much the same effect.

The November election at the national level gave Republicans control of the House of Representatives, making state receipt of more federal stimulus-type funding highly unlikely. In early January, the Federal Reserve indicated it would not loan directly to state and local governments, in part because of legal restrictions on such actions. And a federal deal between the Obama administration and Congressional Republicans on the estate tax indirectly worsened California's budget picture.

On the other hand, a California Board of Equalization report pointed to a potential new source of revenue. Californians technically were supposed to pay sales tax on Internet purchases from out-of-state retailers such as Amazon but rarely (almost never) took it upon themselves to pay the tax to the state.[35] An explicit obligation of such retailers to collect the tax would bring in over $1 billion, according to the report.[36] Ultimately, that observation led to enactment of an "Amazon tax" as part of the 2011-12 budget.[37]

As the date in which he would take office approached, Governor-elect Brown indicated that explicit borrowing was not something he wanted to do, i.e., he seemed to want to avoid a multi-year workout solution

of the type Governors Schwarzenegger and Pete Wilson had undertaken.[38] And Brown indicated that he wanted a budget deal wrapped up in 60 days after he made his formal budget proposal. Moreover, he began to spell out more general plans to put extensions of the temporary taxes that would otherwise expire in 2011 on the ballot and to shift various programs to local governments, the term of art for the latter being "realignment." One attraction of such realignment is that removing spending from the General Fund tends to reduce K-14 spending mandated by Prop 98 (1988).

Inauguration day brought a speech by the new governor that had elements of old Jerry Brown as well as new. Brown indicated he had read prior governors' inaugural addresses—a "sobering and enlightening" experience and noted that they all start on a high note and then go into the problems of the day. He determined "that what we face together as Californians are not so much problems but rather conditions, life's inherent difficulties."

The element of old Jerry Brown was the suggestion that the budget was an ongoing "condition" and the abstract idea that "problem(s) can be solved but a condition always remains." But the new Jerry Brown was also present in promises of "an honest budget" that would be a "tough budget for tough times" and the statement that he would not "embrace delay or denial." Whereas old Jerry Brown was known for contemplation and a lack of budget focus, the new one would focus on the nitty-gritty of budget negotiations. And, as it turned out, for the first six months of his term, the governor was almost entirely focused on the budget.[39]

Between the inaugural and the presentation of the budget, there were mainly signals from the governor. On the one hand, Brown showed up at a public union event, but did not speak to the audience and left quickly. The message seemed to be that he would not be beholden to the unions that had supported him in the election. On the other hand, he appointed a labor lawyer who had represented the prison guards' union to be his personnel director, signaling that he hoped for a cooperative approach in negotiating various labor agreements that needed to be concluded.

Behind the scenes, a budget strategy had to be determined. The decision to ask voters whether to extend the temporary taxes that were expiring in 2011 had already been made. But it was known that voters had rejected such an extension in May 2009. They might well reject extensions again. Brown could have come in with an all-cuts "budget from Hell" to show what would occur if there was a rejection. He could then have posed an alternative, less-severe budget with the added revenue from tax extensions.

Perhaps the budget from Hell would have persuaded voters to look favorably on extensions as a way out of Hell. The danger, however, was that a budget from Hell might be attacked by liberal Democrats on whom Brown was counting. There might not even be a majority vote to be had for such a budget if liberals were offended. In addition, state treasurer Bill Lockyer argued that there could be a backlash if Brown "seem(ed) to be threatening voters."[40]

Another approach was to present a budget proposal which *assumed* that there would be a vote on tax extensions and that voters would approve them. It could then simply be said that since such a budget would still involve significant cuts, voters could presume that an undisclosed budget from Hell would be much worse—but without details. The choice was made to go with a budget that assumed a vote which approved extensions.

There was a third alternative, one the Legislative Analyst pointed to, in which some kind of multi-year workout budget would be presented with temporary measures and implicit borrowing. Although that approach could be derided as "kicking the can down

the road" or "smoke and mirrors," it had merits that deserved attention given the alternatives. But the multi-year workout approach was not considered, seemingly ruled out by Brown's pledge of an "honest budget" and his expressed disdain for borrowing.

THE JANUARY BUDGET

"For ten years, we've had budget gimmicks and tricks that pushed us deep into debt. We must now return California to fiscal responsibility…"

—Governor Jerry Brown presenting his January budget proposal[41]

"There are not votes in the Assembly Republican Caucus to place the same tax increases that voters overwhelmingly rejected less than two years ago back on the ballot."

—Assembly Republican leader Connie Conway[42]

"Voters were given this choice (extending temporary taxes) back in 2009 and they rejected it and frankly they were right to reject it."

—Senate Republican leader Bob Dutton[43]

The governor's January budget was, as had been expected, a mix of extensions of the temporary tax increases that had been approved in February 2009 but which would require a vote of the electorate and spending cuts. He wanted a special election on the extensions sometime in June.44 One way of putting the extensions on the ballot would have been via initiative, i.e., signature gathering. But Brown chose instead to do it via the legislature which would seemingly require a two-thirds vote and, therefore, some Republican support; four legislative Republicans would be needed. The notion was that if there was some Republican support, even just the minimum four, the ballot propositions could be depicted as bipartisan, which—it was believed—would enhance the chance for approval. Brown knew that voters had rejected extensions in May 2009 so the bipartisan label would be desirable to induce a change of mind.

If the initiative process had been started immediately, there might have been enough time to put the choice before voters by June. But starting that process and also asking for the alternative—legislative approval—would have undermined any chance of Republican support. Why would Republican legislators, given the high price of cooperating with the governor, want to vote for something that would be on the ballot anyway if they didn't cooperate? Conceivably, with the governor desiring to go only via the bipartisan legislative route, Republicans could negotiate with him about the budget itself and anything else they might want. As the minority party, they might achieve some goals otherwise beyond their reach.

However, as the quotes at the outset of this section suggest, Republicans declared immediately that they would not cooperate with the tax extensions. Brown evidently did not take them at their word and seemed to view such statements as negotiating ploys. His assessment turned out to be a mistake; they were true to their word in the end.

Brown asked for approval of the extension ballot proposition and the budget as a whole in 60 days, ostensibly to provide enough time for the mechanics of a special election to function. (In fact, there was more time and the actual deadline from an administrative viewpoint was fuzzy and flexible.) But once the clock had run on the 60 days, there was no way that a petition process for an alternative initiative could accomplish his objective by June. Brown also declared a new fiscal emergency which superseded the emergency declared by Governor Schwarzenegger in December.

From the Republican perspective, running the clock was a desirable strategy. Under Prop 25 that voters

had recently approved, a cuts-only budget could be approved by a simple majority. So Republican votes were not needed if that painful route were eventually chosen. Democrats would be blamed for the cuts in that event, since they had the needed simple majority. Republican Senator Bob Huff signaled that Republicans would not need to come up with a cuts—only budget themselves. "It's a majority-vote budget," he said. We're not the majority. We respect that. We'll be part of the process but it's not like we're going to lead with all the things where we become the bad guys."[45]

Indeed, Republicans set out to prove that there might be a way for Democrats in the legislature to put tax extensions on the ballot as modifications of prior initiatives. They were able to obtain a limited legal opinion, seeming to endorse that view. According to a Republican spokesperson, the opinion suggested that Democrats were just looking for "political cover" in asking for GOP votes.[46]

But in fact, following a legally-questionable approach would probably have failed. A court might well have enjoined the process and pushed whatever election there was—if it were ultimately allowed—well beyond June. However, the objective from the Republican perspective was mainly to indicate that Brown and the Democrats didn't need Republican support and should go ahead on their own (and answer to the electorate for what followed). Assembly speaker John Pérez complained that Republicans were "trying to abdicate their responsibility" by raising the simple-majority approach.[47]

Even had the governor ultimately received sufficient support from Republicans to put his tax extensions on the ballot, a court opinion in late January suggested that the wording of the ballot title and summary would not be in the control of the legislature. Initiatives that are filed receive a title and summary from the Attorney General and that language can have an influence on voter receptiveness. However, the legislature had in earlier propositions that it had placed on the ballot reserved the right to create its own (enticing) language for the title and summary. In a case involving legislature-determined language for a 2008 bond proposition for high-speed rail, it was ruled that the legislature could not author the language but, as in the case of initiatives, would have to rely on the Attorney General.[48]

As will be described below, in the end Brown did not receive Republican support and there was no special election. Such an election—had it occurred—would not have been confined to Brown's tax extensions and would have included any initiative that had previously qualified plus a constitutional amendment passed by the legislature in October 2010 involving an enhanced "rainy day" fund.[49] A budget was passed eventually that did not include extensions and thus had more severe cuts than if extension revenues had been part of the package.

Given hindsight, and given the statements made by Republicans initially, it can be asked why Brown continued for almost six months to try and negotiate a deal with them. Democratic leaders in the legislature came to the conclusion more quickly than Brown that no deal could be reached but could not proceed until he signaled that negotiations had failed. It may have been that Brown's approach was reflective of his earlier terms as governor in which the legislature was less polarized and in which bipartisan deal-making was commonplace.

As for the numbers, **Table 4** summarizes the Legislative Analyst's budget estimates as of November 2010. **Table 5** summarizes the governor's January 2011 proposals. Brown's revenue estimates with no tax extensions were more pessimistic than the Legislative Analyst had made in November. Thus, absent any modifications, the 2010-11 budge—instead of showing a slight surplus—was about $2 billion in deficit. Some of the discrepancy between the Legislative Analyst's numbers and the governor's involve a change in accounting accrual practices,

apparently made to reduce the Prop 98 guarantees to K-14 education.[50]

Table 4: The Budget as Seen by the LAO in November 2010 ($ millions)

	FY 2009-2010	FY 2010-2011	FY 2011-2012*
Fund Balance Start of Year	-$5,375	-$5,371	-4,591
Revenue & Transfers	87,041	93,284	83,530
Expenditures	87,037	92,505	102,756
Surplus/Deficit	+4	+797	-19,226
Fund Balance End of Year	-5,371	-4,591	-23,817

*Workload estimate.

Source: Legislative Analyst's Office, *The 2011-12 Budget: California's Fiscal Outlook*, November 2010, p. 3

Table 5: The January 2011 Budget Proposal ($ millions)

	LAO: Nov 2010 2010-2011*	Governor: No Change 2010-2011	Governor: Proposal 2010-2011
Fund Balance Start of Year	-$5,371	-$5,342	-$5,342
Revenue & Transfers	$93,284	$90,687	$94,194
Expenditures	$92,505	$92,793	$92,209
Surplus/Deficit	+$797	-$2,106	+$1,985
Fund Balance End of Year	-$4,591	-$7,448	-$3,357
	2011-2012*	**2011-2012**	**2011-2012**
Fund Balance Start of Year	-$4,591	-$7,448	-$3,357
Revenue & Transfers	$83,530	$83,513	$89,696
Expenditures	$102,756	$100,749	$84,614
Surplus/Deficit	-$19,226	-$17,236	$5,082
Fund Balance End of Year	-$23,817	-$24,684	+$1,725

*Same as Table 4. Note: Accrual accounting practice changes were made in the January 2011 budget proposal that are not reflected in the LAO's November 2010 estimates.

Source: California Governor, *2011-12 Governor's Budget Summary*, January 2011.

Brown's proposal would have made a mid-year change in the ongoing 2010-11 budget, moving it into a $2 billion surplus, a swing of $4 billion. Extension of the income tax surcharge was part of that swing. On the other hand, Brown projected the no-policy-change / workload budget for 2011-12 to have somewhat lower expenditures than the LAO had assumed. In the end, however, both LAO and the governor indicated that the General Fund, if no changes were made, would have a negative balance on the order of $24 billion by June 30, 2012. Neither version was sustainable; there would have to be policy changes.

Brown's chosen method of presenting his proposals for the remainder of budget year 2010-11 and the upcoming 2011-12 year roughly characterized his approach as half tax extensions and half spending cuts. That division may have been framed to sound like an obvious compromise. However, the revenue jump in the combined two years was about $9.7 billion and some of that increase was natural growth from economic recovery, anemic though it may be. The combined expenditure cuts from the no-policy-change budgets of the two years were about $16.8 billion.[51] So the Brown proposals were in fact heavier on the cuts side than on the revenue side.

Moreover, if Brown were willing to accept simply a non-negative fund balance as of June 30, 2012 rather than the approximately $2 billion he targeted, he could do with somewhat less of a revenue increase than he proposed, maybe about $8 billion. If some good news on revenues came along and boosted the revenue estimate—something that ultimately happened—he could do with even less. If he did the proposed expenditure cuts first, i.e., if he could persuade the majority Democrats to approve them, the only thing that would be left on the table were revenues from tax extensions. And if a deal for those extensions fell through, a combination of optimistic revenue assumptions and incremental cuts above the January proposals would produce a budget that at least "balanced" by some definition on paper. Essentially, that is what occurred although it took six months and much *Sturm und Drang* to get there.

GETTING THERE: PART 1—EARLY NEGOTIATIONS AND CONTROVERSY

"Those of you who'd like to argue a little longer, or advocate, well, maybe come on over. I'll give you a cup of coffee."

—Governor Jerry Brown to a group of local officials upset about his plan to abolish redevelopment agencies[52]

"You can't build a budget on the assumption that you will lose in court. State government would come to a screeching halt."

—Department of Finance spokesperson H.D. Palmer[53]

There were controversial elements in the new budget. Although voters in November 2010 (Prop 24) had rejected repealing various tax breaks for business that had been included in the February 2009 budget deal, Brown proposed eliminating one of them which, it was argued, fostered moving jobs out of state. He proposed delaying issuance of previously-authorized bonds for transportation projects to avoid debt service on those bonds in 2011-12.

Of course, most of the complaints about the budget came as a result of cuts in allocations to particular programs ranging from higher education to courts and to social services including health care. From January onwards, there were protests about such cuts and lobbying aimed at persuading the legislature to reject them. In some cases, litigation was filed or threatened.

As part of his attempt to sell his budget/tax extension proposal, the governor undertook symbolic actions aimed at demonstrating frugality, i.e., taking away state worker cell phones and automobiles. In a move somewhat reminiscent of Governor Schwarzenegger's first term, he asked for a study on reducing waste in government and improving efficiency. In Schwarzenegger's case, an elaborate study produced volumes of analysis that ended up forgotten. Governor Brown's effort was less extensive. He asked the state auditor for suggestions and she sent a short list without attaching a tabulation of the actual savings that could be achieved.[54]

REDEVELOPMENT

The issue that raised the most heat was proposed abolition of local redevelopment agencies. Such agencies are set up by municipal governments to undertake what used to be called "urban renewal," a phrase that now has a negative connotation. Essentially, the agencies rely on "tax increment" financing for various development projects.[55] An agency will undertake, often in partnership with private developers, projects that—if successful—will raise property values. The increase in property values is earmarked for the agency to use for paying off bonds it issued to finance the redevelopment.[56]

As the state's budget problems worsened, it found various ways to raid local funding including those of redevelopment agencies. In response, as noted earlier, voters approved Prop 22 in November 2010 which made such raiding more difficult. Governor Brown might have done some raiding of redevelopment agencies had Prop 22 not passed. But since the new proposition precluded that approach, he proposed simply to abolish the agencies. If they did not exist, rechanneling their funds would not be a raid.

In the convoluted intertwining of state and local finance, particularly in the wake of Prop 98 of 1988 that guarantees funding to K-14 education, the diversion by redevelopment agencies of property taxes takes money

from schools which the state makes up. Ending that diversion reduces the state's obligation. In the governor's plan, there would be a one-time contribution from redevelopment agency abolition in 2011-12 of $1.7 billion. Past debt service of the agencies would continue to be paid until the obligations ended. And those revenues not needed for debt service after 2011-12 would go to the locals thereafter, in effect funding some of the realignment shift of state responsibilities to the locals.

Redevelopment agencies, however, are usually big operations and often have strong support from local political officials since they allow local enhancement of economic activity. There is much controversy about the net effect of redevelopment agencies, i.e., whether they are worth their cost or are doing Good Works. But local governments clearly were upset at the prospect of having them abolished. Indeed, Prop 22 was supposed to protect the agencies' funding, not kill them outright.

Examples of some of the redevelopment projects funded in Los Angeles, or slated to be funded, include a downtown streetcar, the fostering of a "Cleantech" manufacturing area, and a mixed-use plan for Grand Avenue in the area of the Disney Hall and Music Center. In addition, some municipalities had found ways of covering some city expenses. City workers who really handle basic municipal operations might be placed on agency payrolls.

Moreover, redevelopment agencies are local entities and result from local municipal decisions. The Brown budget in part was based on "realignment," which—as noted earlier—meant transferring responsibilities from the state to the locals. Even if redevelopment agencies make bad decisions (or if municipalities make mistakes in creating these agencies)—as critics argued—it seemed contradictory to tell locals that they would be given more responsibility while at the same time taking away their authority to promote redevelopment. In effect, the contradiction was to give locals more authority on one hand but tell them bad decisions were forbidden on the other. Making mistakes is inherent in having responsibility and even in the best of circumstances, there will be errors of judgment.

In any event, the proposal to abolish redevelopment agencies guaranteed legal challenges, particularly given Prop 22, the popularity of redevelopment among local political leaders, and the considerable influence the agencies themselves had accrued over the years.[57] It also set in motion a perverse rush by local governments and redevelopment agencies to approve projects—some undoubtedly hastily planned—to commit the agencies to the projects before they were abolished. The governor's initial proposal seemed to permit and grandfather project continuation and repayment of existing obligations.

As the rush continued—there were threats to amend the proposal to terminate recent projects. In addition, to circumvent Prop 22's ban on raiding the agencies' funds by the state, the governor's plan for the first year—when the agencies had not yet ceased to exist—created an intermediate entity to do the raiding and then pass the money to the state. The Legislative Counsel (not to be confused with the Legislative Analyst) opined that this indirect raid was not legal and the money could not be passed to the state. The Department of Finance declared that it disagreed with that interpretation. But the episode foreshadowed the eventual legal challenges to the redevelopment plan that followed passage of the 2011-12 budget.[58]

PUBLIC WORKERS AND PUBLIC PENSIONS

Around the country, Republican governors began varying degrees of attack on collective bargaining rights for state and local employees. Unions overwhelmingly give their political support—both

in dollars and in in-kind get-out-the-vote efforts—to Democrats. The Republican argument was that unions were negotiating overly-generous pay and benefits and that these costs were harmful to distressed public budgets. The State of Wisconsin was home to an especially bitter legislative battle over the collective bargaining issue.[59] There was also a brief push to have Congress (now that the House was under Republican control) create a legal mechanism for states to declare bankruptcy—presumably allowing state governments to void or renegotiate existing collective bargaining agreements. The idea was dropped when it seemed likely that allowing such bankruptcy would tend to undermine the market for state government bonds.[60]

In California, where unionization is higher than the national average, almost entirely because of higher unionization rates in the public sector, collective bargaining as a legislative issue did not arise because of Democratic control and the general tilt of state politics. However, in particular localities—notably the City of Costa Mesa—there was a Wisconsin-type battle. That small city managed to garner statewide attention when one employee committed suicide after receiving a layoff notice.[61] Palo Alto's city council voted to put on the ballot a proposition that would end that city's compulsory (binding) arbitration system for settling labor dispute impasses.

While collective bargaining *per se* was not a major issue in California, public pensions became a proxy for that issue, although many nonunion employees in the state are covered by pension systems. Pensions essentially come in two flavors: "traditional" defined benefit pensions and "401k"-type defined contribution pensions.[62] The former involve the creation of a pension fund which receives employer and employee contributions in varying proportions to pay benefits to retirees. Those benefits are based on a formula typically involving age, length of service, and earnings history of the beneficiaries. Defined contribution plans—in contrast—are essentially tax-favored savings accounts for individual workers which receive employer and employee contributions. Covered workers generally have a choice of investments such as stock funds, bond funds, and less risky assets such as certificates of deposit.

Under defined contribution plans, employees on retirement have a sum of money reflecting contributions and investment returns—whatever those turn out to be. The risks entailed due to investments that don't pan out or due to inadequate contributions over the years are borne by the employee. Under defined benefit plans, investment risks are covered by the employer since the eventual monthly pension is determined by formula. In the private sector, defined benefit plans were commonly components of union contracts but as unionization declined in private employment, so—too—did defined benefits there. In the public sector, defined benefit plans actually predated unions; when public sector unionization came along—mainly in the 1960s, 1970s, and 1980s—unions essentially inherited an employment system which came with such pensions.

Defined benefit plans can become underfunded since ultimately the plans must pay the accrued benefits whether or not sufficiently funding has been gathered from contributions and investment earnings. By definition, defined contribution plans cannot be underfunded since the employer owes only the contribution it puts in and those contributions are made upfront. If those contributions—or the investment income the employee derives from them—prove to be inadequate to support the employee in retirement in the style he/she might have expected, that is the misfortune of the employee/retiree, not of the public employer.

California has three major state pension funds. CalPERS covers most state employees, apart from those of the University of California, and the

employees of local governments—other than schools—that are part of the system. (Some local governments—such as the City of Los Angeles—run their own pension systems and are not part of CalPERS.) CalSTRS covers teachers in school districts around the state. Finally, the University of California runs its own pension system. (The California State University system—CSU—is part of CalPERS.)

All three of these state systems were significantly underfunded during the period when the budget for 2011-12 was under negotiation. A significant part of the unfunded liability was due to the stock market decline associated with the financial crisis of 2008 and the Great Recession. There was also a past history of underfunding and improvements in the pension formula from the employee perspective during the dot-com boom, improvements premised on unrealistic projections of fund earnings.

The University of California had a unique pension problem. Its plan had long been *over*funded thanks to good investment returns and had experienced—as a result—a two-decade period in which the plan received no contributions (employer or employee). Prior to this long contribution "holiday," the state had paid the employer contribution. Even before the 2008 financial collapse, it had long been known that the holiday would have to end once the funding ratio dipped below 100%. But when that happened, the state took the position that it had no responsibility for the UC pension system. The earlier history of state contributions was forgotten.

Largely due to outside revenues from hospital operations and research grants, roughly $2 out of $3 that would go into the UC pension fund if there were employer contributions would come from *non-state* sources. But if the state (or the Regents) did not pay into the fund for employees who were state-funded, the other non-state contributions could not be collected. Another way of posing this problem is that each $1 *not* put in by the state (or Regents) costs the pension fund an additional $2. During budget crises in the early 1980s and 1990s, the legislature—while strapped for immediate cash—made its contribution in the form of an IOU to the plan, payable over an extended period. This time, however, even the IOU solution was not implemented.

In earlier budget legislation for 2009-10, the legislature had actually declared that it had *no* responsibility for the UC pension system. It later was persuaded to delete that declaration. However, there was no money appropriated for the UC pension contribution despite the deletion. The Regents modified the pension plan for new hires in December 2010 and began a scheduled ramping up of employer and employee contributions. However, the failure of the state to make contributions to the UC pension, even in the form of an IOU, meant that the seeming equality of budget cuts to UC and CSU was in fact heavier on the UC side. CSU did not have to make pension contributions from whatever it received from the state. And, absent hospitals and major research grants, it did not have the $2-for-$1 problem. UC had to restart pension contributions and do so out of the general appropriation of the state for core educational functions.

During the 2010 gubernatorial election, Meg Whitman pushed for conversion of public pensions to defined contribution, both state and local. (She made an exception for police which, as noted above, was the central element in the "whore-gate" affair.) Jerry Brown talked about pension reform but was vaguer on the details. Part of the issue is that there is strong legal support for the position that public sector pension promises that have accrued cannot be reduced.[63]

It was clear that new hires could be put under a less-generous system, whether defined benefit or defined contribution. It was less clear whether changes could be made in the formulas covering current workers. If the formulas could be changed going

forward, in effect such workers would be guaranteed whatever they had accrued under the old system but would thereafter accrue at a lower rate under some new system, or be given a defined contribution plan. Even if that were legal, exactly how it would work in practice promised to be a complicated problem.

Proponents of switching to defined contribution plans generally argued that there would be budgetary savings. But they tended to neglect the most prominent feature of such plans; you actually have to contribute to them upfront. You have to have the cash on hand to make the contribution each year. You can't defer contributions. In contrast, the possibility of underfunding defined benefit plans gives budgeters some wiggle room in Bad Times. Moreover, switching from defined benefit to defined contribution does not erase the past liability under the old plan.[64]

In any event, legislative Republicans signaled that any budget deal that Governor Brown wanted them to endorse would have to include pension reform with some elements of 401k-type future benefits. As Republican State Senator Mimi Walters indicated, "We want reforms in place *before* there's any discussion about tax increases. I do know there's not support at all to even put it on the ballot without significant pension reforms."[65] (Italics added.) Along the way, Brown did offer pension changes. But from his perspective, the immediate state budget was largely unaffected by pension changes—since past accrued pension liabilities would have to be paid. Reducing benefits for new hires (and there would be relatively few new hires in the context of a budget crisis) or even benefits going forward for incumbent workers (if that were legal), would have little impact on the total cost to the state budget in 2011-12.

Generally, the Legislative Analyst favored a pension system that would be a hybrid of a defined benefit plan and a defined contribution plan for new hires. The state's Little Hoover Commission came out in favor of a reduced plan for new hires and—going forward—for incumbent workers and then testing the legality of that approach in court. A CalSTRS spokesperson termed the proposal "meaningless," arguing it was clearly illegal.[66]

Some version of a pension reduction plan might in theory have been negotiated with the governor by Republicans in exchange for a vote on tax extensions. But, as described below, there appeared to be no way to induce a tax extension vote, certainly not by June. However, via initiative, proposals to change public pensions could be put forth without action of the legislature. In a defensive move in early May public sector unions created "Californians for Retirement Security" to campaign against any pension ballot propositions that they disliked.

The pension issue led to dueling estimates of public sector pay vs. private.[67] Although proponents of reducing public pensions tended to point only to the pension element of compensation, a true comparison involves estimating total compensation (pay and benefits including pensions) in the public and private sectors. The differences in occupational mix between public and private employment must also be considered. It is clear that public employees generally have a larger fraction of their compensation in benefits than private employees. But if salaries and wages are lower for comparable public employees, total compensation might be roughly the same in the two sectors.

Although one study found total compensation a bit lower for public workers in California than private, and another a bit higher, there is enough uncertainty about the estimates to leave the precise answer undetermined. That is, the across-the-board public/private pay differential cannot be stated precisely but there is no evidence at the macro level of substantial over- or under-payment. However, there certainly are anecdotes and specific instances of abuses to

hold popular attention. Much attention was focused on the City of Bell in which the city manager was paid at outrageous levels and there were similar abuses regarding other city employees, notably the police chief.

There was no pension component to the eventual state budget deal reached in June since no deal on taxes was ever reached with legislative Republicans. Various union agreements negotiated at the state level increased employee pension contributions and provided some kind of two-tier arrangement with less generous pension provisions for new hires. (Similar agreements were bargained by local governments.) Various state-level pension initiatives were filed but—at this writing—none appeared to have the financial backing for a signature and election campaign.[68]

GETTING THERE: PART II—WORKING TOWARD THE DEADLINE

"It would be unconscionable to tell the electors of this state that they have no right to decide whether it is better to extend current tax statutes another five years or chop another $12 billion out of schools, public safety, our universities and our system of caring for the most vulnerable."
—Governor Jerry Brown 2011 State of the State address

"I don't understand why it is that the media has such a hard time with the idea that the people in (May) 2009 said no (to tax extensions)."
—Republican Senate leader Bob Dutton[69]

As Governor Brown's first month in office came to an end, he delivered his State of the State speech to the legislature which reiterated his call for Republicans to accede to his proposal for a special election on tax extensions. By then, about three weeks of the 60-day deadline he had given to the legislature to pass a budget (with the extension election) had elapsed. In the State of the State speech, he compared the call for democracy in Egypt (the "Arab spring" which had then erupted) with the need for a vote by Californians on tax extensions—a bit of a stretch.

Despite the rhetorical flourish, there was no sign that Republicans were becoming receptive to the placing of proposition on the ballot by June that would allow a vote on tax extensions. One factor that began to creep into the discussion was that revenues of the state—mainly from the personal income tax—were up 11% through January relative to the same period in the previous fiscal year.[70] Income taxes are very sensitive to developments in the upper tax brackets, especially capital gains. So they can be out of line with the underlying economy, depending on the incentives to sell stocks and other assets that have appreciated. Despite the erratic nature of such receipts, the more there was short-term good news on revenues, the less convincing was the argument for tax extensions.

To try to offset such impressions, legislative Democrats asked the Legislative Analyst Office (LAO) to come up with a "budget from Hell," since the governor hadn't explicitly provided one. The LAO presented suggestions for how such a budget might look and found hypothetical reductions of $13.5 billion.[71] But, of course, such an exercise was not a budget, or even a budget proposal. Budgets and budget proposals come from the governor and legislature, not the LAO, and must be politically feasible. Moreover, the LAO report was premised on the governor's revenue assumptions (and on the governor's insistence on a positive general fund balance by June 30, 2012). Some combination of added revenue—from a rising tax base, not extensions—or a less-strict ending point might avoid, or partly avoid, the budget from Hell in the LAO's example.

In any case, while Republicans talked with the governor and made public statements expressing their wish for various goals related to pensions and other items as the clock ticked. There was never a clear statement that votes would be provided for tax extensions to be placed on the ballot by the June deadline. GOP senate leader Bob Dutton said in mid-February that he was "not interested in providing any votes" and that "nobody (among legislative Republicans) has approached me and said they're willing to go in that direction."[72]

Despite such statements, Governor Brown appeared confident that a deal could be reached and seemed more concerned with the technical issues. For example, there was the question of whether the budget-related ballot issue could be posed as a single proposition or whether a series of budget-connected propositions would be needed. While Dutton was making his observations, Brown said he preferred a ballot offering that would be "clear and simple" but indicated that the details had yet to be decided.[73] (Ultimately, the title for the ballot proposal was to be named appealingly, the "Public Safety and Public Education Act of 2011.") In a joking reference to his former Jesuit training, Brown said he could grant Republican legislators who had taken a no-tax pledge a "dispensation" from their vow.[74]

The governor's dispensation remark was made in the context of an unusual hearing in which he testified at a legislative budget hearing. So Brown was clearly focusing on communicating with legislators of both parties. Relying on the governor's assurances that a tax extension deal could be reached, the Democrats in the legislature began to work on enacting the budget cuts that were contained in his January proposal. However, even if enacted, some of the cuts were not wholly within legislative control; Medi-Cal cuts, for example, might require federal approval.

Some proposals, while not needing federal government approval, might involve federal courts. The state—as noted—was under pressure to reduce prison enrollments—or spend more on prisons—as part of federal litigation. Part of Governor Brown's response to that pressure was to incorporate the prison issue into his proposal for realignment—the pushing of state functions down to the locals.

In the case of prisoners, realignment would move certain state prisoners into local jails. However, there was pushback from local officials who argued that county jails were already overcrowded and parole officers were already overburdened. As a result, the realignment proposal for prisoners had to be scaled back.

In other cases, there could be indirect effects of budget cuts. Tuition at UC and CSU might rise (and ultimately did), depending on the depth of the budget cuts. At a more conceptual level, UC-Berkeley's chancellor indicated that his campus had effectively gone from being a "state-supported university to a state-located university." With state support diminishing and increased reliance of federal research funds, he asserted that UC-Berkeley could be described as a federal institution.[75] Apart from abstract concepts, to varying degrees, UC campuses moved toward acceptance of more out-of-state residents who pay full tuition as a source of revenue. Campus layoffs were also announced.

GETTING THERE: PART III THE DEADLINE PASSES

"I meet with them all the time, night and day."

—Governor Jerry Brown asked if he is meeting with Republicans a week before his 60-day deadline expired[76]

As the 60-day deadline Brown had set for the legislature to pass a budget and put tax extensions on the ballot approached, there was no sign of the latter happening. The needed Republican votes were still lacking. The governor worked on rounding up business support, hoping Republicans would respond to the business community. As noted earlier, the state Chamber of Commerce did not exactly endorse the specifics of his plan but hinted that a deal which included comprehensive reform (essentially other items such as pensions) would be supported. The Bay Area Council was more explicit in supporting the governor's plan, as was the Silicon Valley Leadership Group. Business groups in the Los Angeles area also gave support. But from the conservative Howard Jarvis, such business support was characterized as "appeasement" of legislative Democrats.[77]

Brown continued to believe that he could garner a few needed Republican votes and suggested that the 60-day deadline might have to slip a bit. However, on March 7, five Republican legislators—the "Gang of Five"—sent a polite letter to the governor saying that since their proposals for "real reform" were evidently not acceptable, the talks had "reached an impasse."[78] Their proposals—the precise wording of which was never completely clear—were developed with the advice of two fiscal consultants, one of whom, Mike Genest, was a past budget director of Governor Schwarzenegger and who was also connected to groups pushing for public pension cuts.

Meanwhile, the governor's relationship with Republicans took on a testy edge. The chair of the State Republican Party offered Brown an invitation to debate Grover Norquist—author of the no-tax pledge that many legislative Republicans had signed. Brown, who had criticized Norquist as an out-of-state interferer with California democracy, declined the invitation but offered to send his dog Sutter instead for such a debate. And on March 10, Day 60—the official deadline day—came and went without a deal.

A few days later at a Republican state convention, the conservative California Republican Assembly faction pushed to label any Party legislators who voted for Brown's proposed tax extension ballot measure as "traitorous."[79] (A resolution to that effect was never passed.) At around that time, Republican legislators who had been in talks with Brown added relaxation of various environmental rules to their terms for a deal, i.e., issues that were not directly connected to fiscal affairs. Such a deal would have been particularly difficult for Brown since voters had rejected an attempt to relax environmental rules the previous November.

By mid-March, the legislator had approved a modified version of Brown's spending plan, i.e., with cuts at a level that still assumed revenue from tax extensions would be forthcoming. In some instances, however, Republican votes were not forthcoming for the cuts. Brown complained that "they don't want to balance the budget with cuts. And they don't appear to want to balance it with new revenues. So they must want a profound, continuing unbalanced budget."[80] And he continued to predict there would be a ballot measure "one way or another."[81]

Such complaints and predictions, however, did not produce the needed Republican votes for a ballot measure on tax extensions. And, from a purely administrative perspective, it was becoming doubtful that a special election could be held by June. Still, Brown did not concede that the deadline had truly

passed. "We'll know the deadline when we've passed it," he said cryptically.[82]

Apart from the issue of obtaining Republican votes for tax extensions, the redevelopment agency issue remained in a limbo of one-sided negotiations with local governments threatening lawsuits and, alternatively, compromises. There were also threats that even if the legislation proposed to abolish the agencies allowed payments of past debts, the mechanism created to enable such payoffs would be legally questionable and open local government to lawsuits by agency creditors. The redevelopment issue also split organized labor, an important Democratic Party constituent.

The California Teachers Association (CTA) and Service Employees International Union (SEIU) Local 1000 favored abolishing the agencies because of the added resources abolition would generate for the state budget. (Schools are heavily dependent on state budget aid and SEIU 1000 represents state workers who had an obvious interest in aiding the budget.) AFSCME, with significant local government membership, and construction unions, which liked the jobs redevelopment creates, opposed abolition.[83] Meanwhile, in the rush to grandfather new projects, the agencies were reported to have floated at least $770 million in new bonds from January through late March.[84]

The issues of a ballot measure, redevelopment, and unions were linked. With the clock ticking, the governor began to hint at a November 2011 special election rather than one in June. Were that to occur, the tax *extensions* would by then become tax *increases* and would thus face a much higher hurdle for voter approval. (Alternatively, the taxes could be extended until the election, something Republicans would be very unlikely to support.)

Funding for a campaign to pass such a proposition would have to come largely from organized labor. However, there might be time to put a tax proposition (or propositions) on the ballot in November via petition, i.e., without Republican votes. Thus, hints of a November strategy could have been a tactic to indicate to Republicans that they had less leverage than they thought.

But if organized labor was not amenable to funding such an uphill fight—and was split on redevelopment—the tactic was not credible unless there was some other source of money. It was noted that Brown had $4 million left over from the gubernatorial election to put into a November initiative approach. That sum was more than enough to round up the needed petition signatures. But it was not enough, absent some other funder, to handle a campaign.

Brown was winding up contract negotiations with various state unions by late March which might have made them more willing to fund a campaign. But funding was still an issue. Unions would not want to invest what could be tens of millions of dollars into a fight that might well be unsuccessful.

Republicans could also make strategic gestures. They pointed to liberal New York Governor Andrew Cuomo who was signing off on an early state budget without tax increases. Brown should do the same, was the argument. In late March, two initiatives were filed on the behalf of legislative Republicans. One was a pension measure that seemed loosely modeled on the Little Hoover Commission recommendations. The other was a formula-based spending cap, effectively designed to revive the old Gann limit, a spending cap which voters approved in 1979 but which they later effectively gutted.

These measures—viewed as a tactic—also had limits. The last time a spending cap was on the ballot in 2005, it was decisively rejected. Earlier such propositions had been rejected under Governors Pete Wilson and Ronald Reagan.[85]

The public response to a pension initiative was also not predetermined. Sacramento politicos and media types tended to assume that cutting public pensions was an automatic winner. And media reports on opinion polls tended to foster that view. It was true that if voters were given a menu of pension cutbacks as hypothetical reforms, they tended to support them, as the March 2011 California Field Poll reported. After all, if a pollster is asking you about reforms, you tend to assume reforms must be needed. Why else would the questions be posed?

But the same Field Poll indicated—although news media seemed to miss the point—that more voters thought public pensions were "about right" or "not generous enough" (48%) than thought they were "too generous" (42%).[86] And this surprising result appeared after well over a year of media reports on pension underfunding and particular abuses.

Still, however these actions and statements by Republicans and the governor are interpreted, there was an underlying fact that ultimately determined the outcome. From the Republican standpoint, talking with the governor and letting the clock run was a winning strategy. Although the exact deadline was never clear, eventually there would be no possibility of a June election and tax extensions would become tax increases if they were then offered to the public. Increases would be tough to pass. For precisely that reason, the increase option might never be offered at all. Republicans could then point to the fact that they were opposed to tax increases or extensions and prevented them from happening.

GETTING THERE PART IV: APPROACHING THE MAY REVISE

"What now? Nobody knows. 'Exploring all our options,' Brown and Democratic leaders are saying. But there is no Plan B."

—Columnist George Skelton[87]

"…I'm going to go up and down the state to see if I can't hug Republicans and… tell them, 'We love you, but give us a break. Let the people vote.'"

—Governor Jerry Brown[88]

If Brown had succeeded with his original 60-day time frame, the standard operating procedure of state budgeting would have changed. Normally, governors submit their constitutionally-mandated budget proposal in January. And normally, although hearings are held, the legislature does not enact that budget before June (and sometimes much later). In May, by tradition, the governor submits the "May Revise," a modified budget proposal that reflects both an economic update (forecasts of revenue, etc.) and a political update (what seems able to be passed). By the beginning of April, it was apparent there would be a May Revise.

Given the general economic climate of the state and the fact that the original budget plan seemed stalled, Governor Brown was doing reasonably well in the public eye. The Field Poll for March found his approval ratings among registered voters at 48%, disapproval at 21%, and 31% in the "no opinion" category. That is, most voters either still thought positively of the governor or at least were withholding judgment. In contrast, when Brown in his previous incarnation as governor left a budget crisis to his successor, George Deukmejian in 1973, Deukmejian's ratings were 42-28-30%. By that measure, Brown was

doing somewhat better than his earlier predecessor, in roughly the same position.[89]

There are no polls on public attitudes specifically regarding those Republicans in negotiations with the governor. But one—Senator Bob Dutton—ended up looking silly when he complained that during the negotiations, he was "yelled at" by Anne Gust, Brown's wife and advisor.[90] A Brown spokesperson joked that the governor's dog also barked at Dutton. Brown said that Dutton was "filibustering" and that Gust had "some level of impatience for that kind of nonsense."[91]

In any event, whatever the public attitude might have been toward Dutton and his complaints about the first lady (and possibly the first dog), the legislature as a whole was very poorly regarded relative to the governor among voters: 16% approve, 70% disapprove, 14% no opinion. Embroiling itself in a controversy over regulating shark fin soup in the midst of a budget crisis did not improve the legislature's image. Not long after the yelling episode, a state panel voted to eliminate the purchase of cars for legislators, substituting a less-costly transportation allowance.

Although exactly what would be in the May Revise was not known, there was preemptive litigation filed. Some "First Five" local commissions—who receive earmarked tax revenue approved by voters—filed suit against a potential taking of that revenue by the state.[92] There had already been cuts in such programs pursuant to earlier raids on First Five funds and there would be more to come.[93] UC-San Diego postponed the establishment of a new law school due to "the state's changing fiscal picture."[94] UCLA's chancellor wrote an op-ed noting that the 29 members of the Republican legislative delegation had attended California higher education institutions but were unwilling to provide a vote that would avoid greater cuts to those institutions.[95]

K-12 teachers and other groups protested at the Capitol. The California Teachers Association oddly pushed for Brown somehow to enact tax extensions without a ballot measure. How he was supposed to produce such a result was a mystery.[96] If he did not have a two-thirds vote for a ballot measure, he certainly did not have it for tax extensions. CTA also ran TV ads urging the legislature to pass a budget, presumably with tax extensions and without an election on the issue. The governor continued to negotiate concessionary contracts with state labor unions but the Legislative Analyst questioned the magnitude of the savings achieved and Republicans threatened to vote against approval of the agreements.

Various budget scenarios were aired. At one point, the governor indicated he might present a budget that assumed that there would be tax extensions on the ballot and that they would pass, even if the votes for such developments had not yet happened.[97] Democrats floated new tax ideas—such as a tax on sugary sodas—but then dropped them since Republican votes were not available for passage. Treasurer Bill Lockyer opined that maybe if an all-cuts budget had to be passed, the cuts should be concentrated in Republican districts. "The people who want less government ought to be at the front of that line to get less government," he said.[98]

Senate leader Darrell Steinberg mused that perhaps children in Republican districts could be spared from disproportionate targeted cuts but perhaps adult services could be considered.[99] Although targeting was denied, a redirection of vehicle license fee (car tax) money contained in the eventual budget particularly hit certain Republican districts. A spokesperson for the governor, commenting on the impact on particular Riverside cities with Republican representatives noted that residents there could "thank (their) legislators for their predicament."[100]

There were symbolic moves as the date for the May Revise approached, such as cutbacks in travel by state workers. And there were practical administrative problems. If the extension of the Vehicle License Fee (car tax) did not occur, the tax rate would fall on July 1. The Department of Motor Vehicles (DMV) would normally have started sending out bills for license renewal due in July 60 days in advance. By legislative action, the sending out of DMV bills was delayed, causing subsequent confusion about renewals over the summer. There was also a move—ultimately not carried out in the face of considerable opposition—to enact a bill giving local governments more authority to raise local taxes. The idea was that if there was going to be realignment—pushing programs down to the locals—the locals should have more control of their own revenues.

Shortly before the May Revise was released, state receipts of tax revenue in excess of projections through April were reported. Compared with the estimates in January for the 2010-11 fiscal year ending in April, an additional $1.3 billion had been received, about $300 million extra in just the month of April.[101] The initial reaction of the Brown administration was to downplay the uptick and to point to a variety of reasons why the revenue bump did not solve the budget problem. Indeed, a list of seventy state parks that might be closed was issued.

However, GOP assembly leader Connie Conway, saying "schools should be first," pointed to the uptick as a solution to K-12 funding issues, a viewpoint that would undermine Brown's tax proposals.[102] And, as it turned out, the uptick essentially became a major element in the eventual enacted budget which depended on optimistic economic/revenue projections. But in early May, the governor still hoped that some kind of tax extension/increase would materialize.

Republicans, however, issued budget proposals just prior to release of the May Revise that included no tax extensions. And word was then passed to the media that the governor's May Revise would drop extension of the personal income tax surcharge for one year and would maintain only the sales tax and vehicle license fee extensions for immediate (July 1, 2011) continuance. The new plan would ask the legislature (which meant some Republicans to obtain the two-thirds necessary) to extend the two taxes until a measure could be put on the ballot in the fall asking voters for retroactive approval.

That position put Governor Brown at odds with legislative Democrats who were not anxious for any election to be held. Assembly leader Steinberg said that the election should be "as far off as is reasonably possible."[103] How approval for the tax proposals—even scaled back—with or without an election was to be obtained absent a two-thirds vote was not made clear by Steinberg or others promoting that path.

THE MAY REVISE

"(T)he May Revise goes too far on taxes and not far enough on reforms."

—Senate Republican leader Bob Dutton

"This proposal… reflects our commitment to a balanced approach… which is why the Governor is calling for revenue extensions..."

—Assembly Speaker John Pérez[104]

Apart from scaling back the original January proposal on extending the income tax surcharge, the May Revise included various business tax breaks—something presumably attractive to Republican legislators. It also included elimination of various state commissions and other entities and reductions in the state workforce. Within broad spending categories, there were many reallocations with some programs proposed to receive more than in January and others less.

As to the idea of a vote on tax extensions, by June the governor could cite a PPIC poll indicating that over

60% of voters favored having such an election.[105] The California Field poll—in contrast—showed continuing support for the election idea but only by a plurality.[106] Differences between the two polls illustrate the impact that reasonable variations in survey methodology and question formatting can have on poll responses.

Table 6 summarizes the highlights of the May Revise in comparison to the earlier January proposal. One of the oddities is that the General Fund was said to have had a negative reserve as of the previous July 1, 2010 in May that was about $1.6 higher than had been reported in January. This revision of history appears to have been largely a change in accounting and is the kind of looseness in state budgeting that clouds the fiscal situation. In theory, the use of accrual accounting by the state should improve understanding of underlying trends. But in practice it appears to open the door to data obscurity and public disdain.

Table 6: The May 2011 (May Revise) Budget Proposal ($ millions)

	Governor: Jan. 2011 Proposal	Governor: May 2011 Enacted to Date	Governor: May 2011 Proposal
	2010-2011*	**2010-2011**	**2010-2011**
Fund Balance Start of Year	-$5,342	-$6,950	-$6,950
Revenue & Transfers	$94,174	$94,477	$95,740
Expenditures	$92,209	$91,693	$91,566
Surplus/Deficit	+1,985	-$2,106	+$4,174
Fund Balance End of Year	-$3,357	-$4,166	-$2,776
	2011-2012*	**2011-2012**	**2011-2012**
Fund Balance Start of Year	-$3,357	-$4,166	-$2,776
Revenue & Transfers	$89,696	$89,867	$93,623
Expenditures	$84,614	$96,888	$88,803
Surplus/Deficit	+$5,082	-$7,021	+$4,820
Fund Balance End of Year	+$1,725	-$11,957	+2,044

*Same as Table 5.

Source: California Governor, *2011-12 Governor's Budget: May Revision*, May 2011.

If the focus is just on expenditures and revenues (and transfers), there is in fact little difference between the flows for the then-current 2010-11 fiscal year between January and May. In January, the General Fund was projected to have a negative reserve of about -$3 billion at the end of 2010-11. Absent any changes beyond what had already been done since January (mainly cuts), the negative reserve by June 30, 2011 would have been about -$4 billion. With the governor's proposal, the negative reserve drops back to -$3 billion. However, with the 2010-11 year almost up, it was to be expected that the big changes would come in the following year.

For 2011-12, absent any major legislative action on the revenue side, revenue for 2011-12 was nonetheless projected to be about the same as the governor had proposed in January. In effect, therefore, a more optimistic forecast was making up for revenues that might have been lost due to not having tax extensions in place. Expenditures—absent more changes (cuts) that had already occurred—would still rise substantially by about $12 billion relative to the January proposal. With further cuts, the increase would only be about $4 billion. If everything the governor proposed in May and forecast in May were to come to pass, the state would run a $4 billion surplus in 2010-11 and close to $5 billion in 2011-12, leave a positive reserve in the General Fund at the end of 2011-12 of about +$2 billion, roughly his January target.

But these numbers all depended on Republican acquiescence to a tax vote and assumed voters would approve the ballot proposals. Yet there were no signs of forthcoming Republican support. A few days after releasing the May Revise, the governor said on that issue that "things (were) more positive than they were" in his discussions with Republicans "but we're not there yet."[107] This pattern continued until it finally became clear that no such support was going to be had, regardless of what the governor might feasibly offer.

Basically, what transpired was on-and-off negotiations, glimmers of hope, and an increasing sense among legislative Democrats that the governor was not going to succeed in obtaining his tax extensions, either by direct vote of the legislature or through some ballot measure that would require a two-thirds vote. Brown could in principle have used the initiative process for his ballot measure but no moves were made in that direction. But had he taken that route, it was unclear that he would have had the financial support needed to do a complete campaign tax proposition.

However, with the governor negotiating with Republicans and giving assurances that something would arise from his talks, the possibility that the legislature would miss the June 15 constitutional deadline to pass a budget increasingly arose. The longer legislators awaited a deal, the closer they got to June 15 without a budget plan ready to go. And under Prop 25 of November 2010—which gave the legislature the power to pass budgets (but not taxes)—by a simple majority, there was included a penalty if it did not meet the June 15 deadline to do so.

Each day without a budget would mean that a day's pay for legislators would be forfeited. Since the legislature had passed a partial budget (the cuts side), there was some argument that it had already met its constitutional duty.[108] That argument was pooh-poohed, however, if not from a legal analysis, then from a political viewpoint. Voters would be furious if what seemed to be the clear penalty of Prop 25 was circumvented.

Although the already-enacted partial budget would not pass muster to avoid the penalty, the legislature could pass a budget that "balanced" on paper by June 15 even if not in its eventual outcome. That approach would seem under Prop 25 to satisfy the requirement for timely passage. "Balance" was more a matter of doing the sums correctly than doing them realistically.

But even doing the sums correctly is not as simple as writing numbers on a sheet of paper. There are budget formulas that have to be followed, such as the Prop 98 requirements for K-14 funding. And there are typically pieces of the budget—trailer bills—that are inherent in the overall budget design but are passed after the basic document. All of these features of budgeting were to come into focus in mid-June.

ENACTING THE BUDGET: PART I— THE FIRST ATTEMPT

"In passing Proposition 25 last November, voters clearly stated they expect their representatives to make the difficult decisions needed… by the mandatory deadline or be penalized. I will enforce the voters' demand."

—State Controller John Chiang stating he would not pay legislators for days after June 15 until they had passed a "balanced" budget[109]

"I now have to explain to my wife and daughter that we won't be able to pay the bills because a politician chose to grandstand at our expense. California has officially degenerated into a Banana Republic…"

—Assemblyman Mike Gatto complaining about losing pay due to the Controller's action[110]

Various developments occurred after the release of the May Revise. Some events seemed helpful for eventual passage. For example, the U.S. Supreme Court ruled against the state on the issue of prisoner releases. Short of just letting prisoners out, the state would have to follow through on its plan to move some of them to local jails. Governor Brown indicated he would ask the lower court for more time to accommodate. But even that approach would require funding from the state to the counties for the costs, and thus seemingly supported the need for tax extensions. However, beyond the issuance of GOP statements criticizing the Court, there was no indication that Republicans were

more favorable to tax extensions after the decision than before.

In addition, although a pension initiative had been earlier filed by Republican legislators, shortly after the May Revise was released, they indicated they would not be circulating the initiative. At the time it was filed, the pension initiative had been seen as a negotiating tactic to pressure the governor and the Democrats. By making no effort to pursue the initiative, the Republican message seemed to be that negotiations on tax extensions were effectively over, i.e., they would not agree to extensions or a related ballot proposition. Indeed, they made the message explicit.

Republican assemblyman Roger Niello—the official sponsor of the initiative—said in explaining the decision not to circulate, "The reason for filing this measure was to have something in line for a November election alongside the measure on taxes, but that appears unlikely to happen now."[111] Still, in early June, the governor still was indicating that a deal with Republicans was in reach. "There's compromises and discussion going on," he said.[112]

As it turned out, however, the deal that Republicans were ostensibly willing to consider would have let the temporary taxes lapse on July 1 and then had an election on whether voters would like to raise them back up. That formula was very likely to produce a voter rejection. Brown by that time was saying that apart from that issue, he was prepared to offer pension changes, a spending cap formula, and regulatory relaxations in exchange for a ballot proposition on taxes, so long as there was a "bridge tax" (an extension of the temporary taxes) until the election.

There was some confusion in reports as to whether Brown was pushing for a 3-month or 6-month bridge; at one point even a 12-month bridge was written into a draft of the budget. However, Republican Senator Bob Huff indicated that "there's no Republican votes for a temporary tax," i.e., the bridge tax was not acceptable.[113] And unions indicated that they did not want to throw money at a campaign for approving tax extensions that would be "fraught with peril" and would likely fail.[114]

With a week to go before the June 15 deadline, the Democratic leadership in the legislature decided to go ahead and pass a budget without waiting any longer for a deal between the governor and legislative Republicans. The only move the Democrats took toward trying to provide some incentive for Republican cooperation was to advance the bill allowing local governments more leeway in raising local taxes. Evidently, it was thought that Republicans would not want such authority bestowed on the locals. And, indeed, GOP legislators termed that bill "another club to use over Republicans."[115] But they did not acquiesce on the bridge-tax/ballot issue despite the "club."

Putting together a budget is a complicated process and a hasty effort to meet a deadline might produce a technically flawed plan. However, legislators seemed to believe that if they passed something by June 15, that action would satisfy Prop 25 and that flaws could be corrected later. The rapid push for enacting a budget seemed to open the door to provisions that might have been differently crafted had more time been available. For example, nursing homes managed to obtain more favorable treatment—given that there would be Medi-Cal cuts—than other health providers, provoking complaints.[116] A legally questionable element was included that would effectively retain the temporary sales tax surcharge. There was also a revival of the dubious Schwarzenegger plan to sell and lease back state office buildings—which Governor Brown had previously rejected.

Tensions rose as the June 15 deadline neared. A near fight in the assembly between a Democratic and a

Republican legislator—ostensibly over a slur against Italian-Americans—was averted as other members separated the two. At the end, a budget was passed within the deadline which Senate leader Darrell Steinberg termed "not perfect. It is Plan B… worthy of the governor's signature."[117]

However, Plan B, as Steinberg had dubbed it, didn't get that signature. The governor had posted a YouTube video about the status of his budget negotiations and told the news media—two days before the June 15 deadline—that the budget was in "a fuzzy zone that's not yet been transcended."[118] But he did not say what he would do with the budget bill legislative Democrats were preparing that was already near completion, perhaps suggesting to them erroneously that he would sign their budget.

However, the day after the budget was passed, Governor Brown vetoed the entire deal "for the first time in history," as he declared. In another YouTube message, he said the budget he had been sent was "not a balanced solution" and was "not financeable."[119] Brown still called upon Republicans to approve his tax extensions. He hinted that he might go the initiative route to circumvent Republican opposition, although that threat—given the explicit and public reluctance of labor unions to finance such an effort—was rather hollow.[120]

There was some support from the business community expressed for the initiative approach in an effort to back up the governor.[121] But putting together a coalition willing to finance an initiative campaign with a large chance of voter failure would have been difficult. And, if proof were needed, it did not happen despite continued refusal by Republicans to back a tax-extension/bridge-tax ballot measure.

Still, Brown's veto was greeted enthusiastically for the drama of it and the governor became a media hero. The veto submerged criticism that the governor—by holding out for almost 5½ months the prospect of an eventual deal with Republicans that never occurred—had set the stage for the last-minute, slap-dash budget he was then rejecting. The legislature had held off its budget drafting because the governor kept assuring its Democratic leaders that such a deal could be made.

If Brown was a media hero, Senate President Darrell Steinberg seemed to be looking to be cast as the anti-hero. The day Brown announced his budget veto, Steinberg responded that the senate would not consider confirming gubernatorial appointees "for an indefinite period," a statement that appeared spiteful.[122] Oddly, there was only one such Brown appointee in the hopper; most of those awaiting confirmation were holdovers from the Schwarzenegger administration. So the holdup in confirmations was not much of a threat.

Although Steinberg explained the confirmation holdup as the result of a need to concentrate the senate on budgetary matters, Brown took it as retaliation but characterized the move "as a small price to pay" (which indeed it was).[123] Steinberg also raised legal issues about the withholding of pay and characterized the controller's action as "dangerous."[124] The problem was that such arguments were really against Prop 25 which voters had approved.

And it was—in any case—impossible for a legislator to complain about the pay forfeiture without appearing to be self-serving. There were complaints from the Republican side that the pay forfeiture was an attempt to make them "compromise values." But Republican legislators were not in a position to be heroes except within their constituencies.[125]

With a hero and an anti-hero in place, there was room for a second hero to step forward. Treasurer Bill Lockyer agreed with the governor that the budget was "not financeable."[126] He estimated that the state would need to borrow $7 billion during the 2011-12

fiscal year but believed it would not be able to repay by the end of the year. While Lockyer's concurrence was noted in news reports, it lacked the drama of a veto and was too technical in nature for him to become a media hero. In any event, the treasurer had no immediate role in the process and could only opine.

The controller—in contrast—had a more direct role. Even though the governor vetoed the budget, the legislature had enacted it by the June 15 deadline. State Controller John Chiang—as the state's official paycheck writer—had earlier declared that he would make a judgment about whether legislators should be paid pursuant to Prop 25 if they had not passed what he interpreted to be a "balanced" budget by June 15. So the issue became whether the controller viewed the vetoed budget—which was passed on time—as meeting his definition of balanced, even if it had not met the governor's.

Chiang set the stage for making a technical decision that could nonetheless be seen as heroic. A spokesperson for his office noted that "balance" did not mean realistic, in the sense that revenues were likely to be what they were projected to be in the budget. Instead, "balance" meant that the calculations were in some sense correct so that *assuming the projected revenues would be there*, the expenditures would be in sync.

One hurdle the vetoed budget might have to surmount, under Chiang's approach, was Prop 98 with its formula-based budgeting for K-14. If Prop 98 was not properly followed, that error would allow Chiang to rule that the vetoed budget was not balanced and that he therefore would not/could not pay legislative salaries. But he could still rule that some subsequent budget that might be optimistic about revenues but had the sums done right would meet the standard.

Chiang could therefore take a stand against an errant and unpopular legislature whose budget the governor had already tanked, so long as he could find a technical mistake in the vetoed budget. Put another way, the balanced-only-if-the-sums-are-done-right approach would not force the controller into some later confrontation with the governor who might have to sign an optimistic budget in the end if no Republican votes for tax extensions materialized. (Chiang later indicated that if a budget were signed by the governor, the controller would have no role in deciding if Prop 25's requirements had been met.)

On June 21, five days after the budget veto, Chiang announced in a media release that the vetoed budget "did not balance on paper." Policy wonks understood that "on paper" meant only that, given the assumptions in the budget, there were technical errors in drafting, the largest being problems of compliance with Prop 98. Other errors found by the controller involved revenues that would require subsequent legislation—legislation that had not been passed by June 15. All of these errors, which totaled less than $2 billion according to the controller, could have been "fixed" by getting the sums right and a more optimistic—though not necessarily realistic—revenue forecast.

But this point was lost on TV versions of what had happened. Chiang became a hero, even on Fox News, which rarely finds heroes among Democrats, because he struck a blow at the legislature. The conservative Howard Jarvis Taxpayers Association declared that "as lawmakers now threaten to sue the State Controller" it "stands behind Chiang in his decision."[127]

On the other hand, from the Democratic side, there came the Hollywood equivalent of "you'll never have lunch in this town again." Assembly leader Charles Calderon said Chiang had "facilitated" a "freak show."[128] Only a year before, Chiang had been a Democratic hero by refusing to cut the pay of state workers to the minimum wage—again, on technical grounds—during a budget stalemate with Governor Schwarzenegger. But his past glories (among Democrats) were forgotten when it meant a pay forfeiture.

ENACTING A BUDGET: PART II—SUCCESS OF SORTS

"This budget is the most austere fiscal blueprint California has seen in more than a generation… Unfortunately, Democrats were forced to deliver alone…"

—Senate President Darrell Steinberg[129]

"Republicans listened to the voters and stayed true to the only special interest we represent—California's taxpayers."

—Assembly Republican leader Connie Conway[130]

By late June, the governor had come to the conclusion that no Republican support was going to be obtained for his tax extensions. Legislative Democrats had come to that conclusion earlier. The idea—pushed by some unions—that the legislature should somehow pass a budget with taxes but no ballot measure (even though a two-thirds vote was needed either way) had been dropped. Controller Chiang had made himself unpopular with legislators—not with the public—but the controller has no role in formulating budget bills.

Governor Brown had also made himself unpopular with legislative Democrats because of his veto of the June 15 budget. But—unlike the controller—without the governor, there could be no budget. So legislative Democrats and the governor inevitably had to craft a budget that could be passed by majority vote and that would not be vetoed. Such a budget might have some elements of revenue enhancements but could not increase or extend taxes. And the ability to raise many fees was now constrained by voter action in November 2010.

On June 27, a new deal was announced, one the governor would sign. In a meeting with the news media, Senate President Steinberg, Assembly speaker Pérez, and Governor Brown appeared together—all appearing friendly—and outlined the details. There was reference to some future initiative on revenues—but it was vague and not part of the 2011-12 budget. In a press release, Steinberg put the date of a possible initiative at November 2012. That date would not even be the first available state election or within the 2011-12 fiscal year. (The state and presidential primary would come earlier: in June at the end of the fiscal year.)

Essentially, the 2011-12 budget was of the "all-cuts" type but with optimistic assumptions on revenue—roughly the optimistic assumptions (a bit less) that had been presented in the May Revise absent the tax extensions. However, as **Table 7** shows, about $5 billion in revenue had to be subtracted from the May Revise because of no tax extensions were included. Expenditures were down about $3 billion from the May Revise so the ending reserve in the General Fund, while positive, was a razor-thin $1 billion.[131]

Table 7: The June Enacted Budget Proposal ($ millions)

	Governor: May 2011 Enacted to May 2010-2011*	Governor: May 2011 Proposal 2010-2011*	Enacted June 2011 Including Vetoes 2010-2011
Fund Balance Start of Year	-$6,950	-$6,950	-$4,507
Revenue & Transfers	$94,477	$95,740	$94,781
Expenditures	$91,693	$91,566	$91,480
Surplus/Deficit	+$2,784	+$4,174	+$3,301
Fund Balance End of Year	-$4,166	-$2,776	-$1,206
	2011-2012*	**2011-2012**	**2011-2012**
Fund Balance Start of Year	-$4,166	-$2,776	-$1,206
Revenue & Transfers	$89,867	$93,623	$88,456
Expenditures	$96,888	$88,803	$85,937
Surplus/Deficit	-$7,021	+$4,820	+2,519
Fund Balance End of Year	-$11,957	+2,044	+1,313

*Same as Table 6.

Source: California Governor, *2011-12 State Budget*, June 2011.

Since the governor was originally committed—he felt—to ending the new fiscal year with a positive reserve, any fall off in revenue relative to assumptions could tip into negativity. Seemingly to avoid that outcome, the budget contained a trigger of more cuts should revenue fall short by a specified margin. As described below, the trigger did not actually guarantee a non-negative reserve.

To justify the optimism on revenues in June, there turned out to be about a $1 billion more revenue received for the 2010-11 fiscal year that was coming to an end than had been included in the May Revise. (That figure was not officially known at the time the new budget was prepared but undoubtedly there were some preliminary figures available to the Department of Finance.) And, as previously noted, the May Revise itself reflected receipts above the January projections. The difficulty was that the underlying state economy was not performing well which could indicate the improved revenue results were transitory.

The January assumption on revenue, absent tax extensions, for 2011-12 was about $83.5 billion. (**Table 4**) The June assumption was $88.4 billion. There was some revenue enhancement in the June budget from the "Amazon tax" (requirement that out-of-state retailers remit sales tax), a rural fire fighting fee, and a car-related fee. So something like an extra $4-$5 billion in revenue was being assumed relative to January.

Among the more publicized cuts were those to UC and CSU—with still more chops planned if the trigger were pulled. Both systems quickly raised tuition in response. But other programs in the social welfare area also were hit that received news media attention. The temporary taxes the governor originally wanted to extend lapsed. And with the budget enacted and the spotlight off the legislature, five legislative Republicans requested that the attorney general review whether controller Chiang had acted legally in cutting off legislators' pay.

As for the trigger, it was actually a two-part affair. If revenues fell below projections by $1-$2 billion—as certified by the Department of Finance in mid-December, there would be a programmed cut in various programs (including, as noted above, higher education) of $600 million. If the revenues were below projections by more than $2 billion, another $1.9 billion would be cut, heavily from K-12.[132] The cuts would take effect on January 1, 2012, half way through the fiscal year. The trigger mechanism would not in fact insure that the General Fund would have a non-negative reserve at the end of fiscal 2011-12, although it would provide some downward cushion.

Of course, the legislature could act at any time during the fiscal year to modify the trigger. And while the trigger was to be pulled if revenues fell short of expectations, there was no trigger if expenditures were higher than projected. So even the cushion's impact was not a certainty. Nonetheless, Treasurer Lockyer now pronounced the budget to be "financeable."[133]

AFTERMATH AND OUTLOOK

"…(O)bsessive, partisan ideology is what's making it impossible to govern."

—Governor Jerry Brown[134]

As noted, in the aftermath of the final budget passage, UC and CSU tuitions were quickly raised, although not to the level the governor had suggested could occur under an all-cuts budget when he was still officially hopeful about ultimately obtaining tax extensions.[135] Referenda petitions were filed to block the "Amazon tax"—the new law requiring out-of-state retailers to collect and remit California sales tax—the fee imposed to finance rural fire fighting, and a complex budget

deal on redevelopment agencies.[136] A bill designed to make it more difficult to gather signatures for ballot measures might have impeded these efforts, but was vetoed by the governor.[137] With the veto, that potential impediment was removed.

A radio ad paid for by labor unions told listeners that signing petitions (any ballot petitions) opened them up to identify theft.[138] Despite the potential hurdle the ad might engender, it seemed likely that the budget-related referenda—certainly the Amazon tax—would make it to the ballot. Early on, Amazon contributed enough money to the campaign to obtain the needed signatures.

When enough signatures for a referendum are obtained to put it on the ballot, the law targeted is blocked until the election.[139] Thus, even if voters reject the referendum's proposal to repeal a law in a later election, revenue that might have been collected is lost in the interim. And, of course, if they vote for repeal, even more revenue is lost. The referenda, in short, represented a downside risk for the state budget.

Legal and other challenges to budgetary components represented a similar one-sided risk. At this writing, a court challenge to the budget's redevelopment agency provisions has been filed. A court decision on Indian gambling revenues threatened a portion of that source of funds.[140] Health providers are challenging a waiver the state is seeking from the federal government for its Medi-Cal savings. A group of Assembly Republicans have asked the attorney general to opine on whether Prop 98's funding guarantee is being satisfied by the new budget.[141]

If a revenue element of the budget is challenged in court or elsewhere, the challenge will either succeed or fail. If it fails, the budget is no better off than it was projected to be. If the challenge succeeds, there is less revenue. Similarly, if there is a legal challenge on the spending side, the claim is typically that not enough is being spent to meet some requirement, say, for federal matching funds. If the challenge succeeds, more will be spent than projected. If it fails, the budget proceeds as it was written. So in the legal realm, as in the electoral realm, the risk to the budget is all in the direction of deterioration, not improvement.[142]

In a sense, the Washington debt-ceiling negotiations during summer 2011 had elements of the Sacramento drama. Governor Brown didn't come to a conclusion until just before the deadline for a new budget that a tax deal was not going to be possible with legislative Republicans. Similarly, President Obama seemed to believe—despite the earlier California lesson—that a compromise with "tea party" Republicans involving increased federal revenue might be had. However, debt-ceiling negotiations and the eventual deal on that subject in Washington at the August 2 deadline echoed back to California in a two-part risk for the state's budget. As in Sacramento, there was little sign of a compromise in Washington.

The debt-ceiling deal of August 2011 had the potential to slow the U.S. economy which already was performing poorly. A U.S. slowdown would be reflected in the state's economy and adversely affect the tax revenues that had been (optimistically) projected for the 2011-12 budget. In addition, various federal funds that flow to California could be reduced or ended. These funds—to the extent that they flow to the state—often affect budgetary categories outside the General Fund for programs such as unemployment benefits and other social welfare objectives. But to the extent they cut federal support in those areas, there would be pressure for state and local governments in California to pick up some of the resulting gap.

Given the downside risk and the trigger provision built into the 2011-12 budget in case of revenue falling below projections, the budget decisions of June 2011 might well have to be revisited as part of a midyear correction. What might happen in such a

revisit is uncertain. But it seems unlikely, given his on-the-job learning update in bipartisan compromise, that Governor Brown will again spend anywhere near the time and effort he did during the first six months of 2011 trying to reach a deal with the minority party.

ENDNOTES

1 This chapter takes the California budget story up through early August 2011. Later developments are not reflected in the text.

2 "Special Report: Democracy in California," *Economist*, April 23, 2011, special report section, p.5.

3 Quoted in David Siders, "Schwarzenegger leaves criticism of GOP Lawmakers behind, praises compromise on budget, *CapitolAlert* blog of *Sacramento Bee*, October 19, 2010.

4 Quoted in Jim Christie, "Brown budget plan too rosy for California investors," *Thomson Reuters*, October 21, 2010.

5 Quoted in Joe Garofoli, "If you hear a candidate say this magic phrase, they're in trouble," *Politics* blog of *San Francisco Chronicle*, October 29, 2010.

6 Judy Lin, "S&P: Calif's fiscal problems different from Greece," *InsideBayArea.com*, May 4, 2011. Greece had a much higher government debt to GDP ratio than California and had social insurance, social welfare, and military obligations far in excess of California's. The only similarity was that once Greece gave up its national currency for the euro, it became like California, borrowing in a currency it could not create or control.

7 Jack Chang, "Jerry Brown credited with election's best negative spot," *CapitolAlert* blog of *Sacramento Bee*, March 11, 2011. The columnist, Chris Cillizza, apparently consulted with other media reporters in making the selection.

8 The ostensible ground for legal action was that Whitman owed back pay to the housekeeper. A settlement of $5,500 was reached after the November election.

9 Quoted in Carla Marinucci, "Meg-bash! Whitman's post-election political autopsy at UC Berkeley brutally dissects 'worst campaign ever," *Politics* blog of *San Francisco Chronicle*, January 22, 2011.

10 "How California Voted: Exit Polling Nov. 2, 2010," *Sacramento Bee*, November 4, 2010. Whitman carried only voters 65 and older. The younger the voter, the higher the margin for Brown.

11 Governor Schwarzenegger characterized Whitman's position on exempting police pensions as "appalling." Seema Mehta and Michael J. Mishak, "Whitman, Brown exaggerate foe's stances on school funding and crime," *Los Angeles Times*, October 15, 2010. However, in various pension deals he struck with public unions as part of contract negotiations, he did not impose defined-contribution plans.

12 Don Novey quoted in Jon Ortiz, "Don Novey loses election gamble against Jerry Brown," *Sacramento Bee*, November 29, 2010. (Novey was a past president of another union, the California Correctional Peace Officers Association that had backed Brown. He became an advisor to the California Statewide Law Enforcement Association that followed is advice and backed Whitman.)

13 Allen Zaremberg quoted in Jack Chang, "State chamber head Zaremberg's relationship with Brown still up in the air," *Sacramento Bee*, December 30, 2010.

14 Quoted in John Myers, "A 'Comprehensive' Budget Deal Is…?," *KQED Capitol Notes*, March 3, 2011. The Chamber's general receptiveness to the Brown proposal angered conservatives. See Jon Fleischman, "The CalChamber Is Ready to Betray Taxpayers Again?," *Flashreport*, March 4, 2011.

15 Preliminary details and analysis on Whitman and Brown spending can be found in Lance Williams, "How Whitman spent $160 million," *California Watch blog*, November 2, 2010. About $144 million was estimated to be Whitman's own money. Jack Chang, "Meg Whitman postscript: another $2.6 million invested in campaign," *CapitolAlert*, November 17, 2010. A final report summary—which repeats the $144 million figure—can be found in Seema Mehta and Maeve Reston, "Jerry Brown nearly matched Meg Whitman's campaign spending on TV in final weeks of race," *Los Angeles Times*, February 1, 2011.

16 Carly Fiorina, another Silicon Valley business executive (from HP), was handily defeated in the general election for the U.S. Senate by incumbent Barbara Boxer. As in the Whitman case, Fiorina was forced in the three-way primary contest to take conservative positions that repelled voters in the general election. A notable example was endorsing in a TV debate the right of those persons on the "no-fly" list to have guns in an effort to compete with conservative Chuck DeVore. Moderate Tom Campbell, who did not think guns for those on the no-fly list was a good idea, noted that only in a Republican primary would anyone take the pro-gun position in that case.

17 Quoted in Seema Mehta, "Meg Whitman says the GOP must change its approach to immigration," *Los Angeles Times*, April 13, 2011.

18 Quoted in David Siders, "Jerry Brown tells state workers to take Republicans to lunch," *CapitolAlert* blog of *Sacramento Bee*, April 6, 2011

19 Quoted in Brian Joseph, "Tax system relies on wealthy," *HealthyCal,* April 7, 2011.

20 The data underlying the charts in this section are based on Tax Foundation figures. However, the Tax Foundation combines taxes paid by residents of states with taxes paid by those residents to other states. Taxes paid to other states are not relevant to cross-state comparisons. Moreover, the Tax Foundation makes assumptions about tax incidence of business taxes and assumes these are passed to consumers wherever in the U.S. the businesses sell. That assumption, however, means that individuals cannot "escape" such taxes by moving from one state to another. The assumption is particularly troublesome in the case of oil severance taxes. Oil prices are largely determined in world markets, a fact which suggests that the tax incidence of state severance taxes does not fall on retail consumers but rather on those firms extracting the oil. The data on the charts are based only on own-state taxes paid. Source of data: Tax Foundation, *State and Local Tax Burdens Fall in 2009 as Revenues Shrink Faster than Income*, Special Report no. 189, February 23, 2011.

21 Quoted in David Siders, "Brown Attributes win to skill, luck, and his 'sparkling personality,'" *CapitolAlert* blog of *Sacramento Bee,* November 3, 2010.

22 Quoted in David Siders, "Jerry Brown pledges bipartisan effort to resolve 'daunting' budget crisis," *Sacramento Bee*, Nov. 5, 2010.

23 Litigation blocked the sale-lease plan and after taking office, Governor Brown cancelled it, leading to further litigation by the developers that planned to buy the buildings.

24 Public Policy Institute of California, *December 2010: Californians & Their Government*, December 2010.

25 Public Policy Institute of California, *January 2011: Californians & Their Government*, January 2011.

26 Mike Genest, "Governor's reforms will help California," *Sacramento Bee*, December 21, 2010.

27 Anthony Adams was subjected to a recall. It did not succeed but he decided against running again. Mike Villines was deposed as Republican leader in the Assembly for going along with the tax increases. Villines ran in the 2010 GOP primary for insurance commissioner and almost lost to a completely unknown candidate whose main virtue to Republican voters was that he was not Villines. Villines was then defeated in the general election. Schwarzenegger also appointed a Senate ally on the budget, Roy Ashburn, to a state commission.

28 Litigation over the validity of the sentence reduction continued into summer 2011 and the controversy periodically bubbled up in the news media. The former governor made snoring sounds when asked about the issue by a TV reporter in April 2011, saying he was bored with questions on the subject, creating unfavorable publicity. Núñez had cooperated with Schwarzenegger in passing a universal health plan for California in the Assembly that later failed in the Senate. The plan was patterned after a program adopted in Massachusetts that eventually became a model for the Obama

federal plan. When pushed about whether his decision was in some respect a reflection of his relation with Núñez, Schwarzenegger said, "Well, Hello! I mean, of course, you help a friend." Quoted in Seema Mehta, "Schwarzenegger defends Núñez sentence reduction, slams Whitman," *PolitCal* blog of *Los Angeles Times*, April 18, 2011.

29 Michael Shields, "Schwarzenegger says governorship cost him $200 million," *Yahoo! News—Reuters*, January 14, 2011.

30 Quoted in Kevin Yamamura, "Lockyer regrets admitting he voted for Schwarzenegger in recall," *Sacramento Bee*, July 14, 2011.

31 Quoted in Jennifer Chaussee, "Anne Gus brings new dimension to the Horseshoe," *Capitol Weekly*, November 24, 2010.

32 Quoted in Ashley Powers and Anthony York, "Jerry Brown heads to Vegas to address prison guards union," *PolitiCal* blog of *Los Angeles Times*, December 6, 2010.

33 Quoted in Greg Lucas, "High court eyes Calif's landmark prison case," *Capitol Weekly*, May 12, 2012.

34 Governor Schwarzenegger also tried to put pressure on the legislature through state unions by trying to impose payment of state workers at the minimum wage when budgets were late. The argument was that absent a budget, there was no authorization to pay state workers other than at the minimum wage. (Workers would be made whole when the budget was passed.) However, his attempt to impose the minimum wage was thwarted by state controller John Chiang (whose office writes paychecks) who said antiquated state computers could not be reprogrammed to pay the minimum wage and meet required labor standards requirements. The issue was never settled—but no one was paid the minimum wage—during the Schwarzenegger governorship and Governor Brown inherited the litigation challenging Chiang's assertion. He dropped the lawsuit in February 2011 on the grounds that, indeed, the computers could not do the job without costly modifications.

35 Over 98% of the tax due went unpaid, according to a Board of Equalization estimate. See Jan Norman, "Report: 98.6% of tax for Internet sales not paid," *Orange County Register*, May 10, 2011.

36 Board of Equalization, *Revenue Estimate: Electronic Commerce and Mail Order Sales*, updated to December 6, 2010. Available at http://www.boe.ca.gov/legdiv/pdf/e-commerce-11-10.pdf

37 Since consumers owed the sales tax on out-of-state Internet purchases—even though they rarely paid it—the Amazon tax was technically not a tax measure. It was a tax *collection* measure referring to an existing tax and thus did not require a two-thirds legislative vote.

38 Brown said that "borrowing's not a free good" in a public forum in early December. That statement appeared to be a signal that he had changed his attitude toward borrowing that he had previously expressed. Quoted in John Myers, "Jerry, Meet Gridlock; Gridlock, Jerry," *KQED Capital Notes*, December 8, 2010.

39 The text of the inaugural address appears in "Third Inaugural Address," *Sacramento Bee*, January 3, 2011. The official text omits some impromptu remarks. When the governor introduced his 98-year old aunt, for example, he joked that opponents should take note of his genetic endowment of longevity.

40 Quoted in Shane Goldmacher, "State Treasurer warns IOUs could loom in April, May," *PolitiCal* blog of *Los Angeles Times*, January 22, 2011.

41 Quoted in Kevin Yamamura, "Brown to ask for deep cuts, five-year extension of taxes," *CapitolAlert* blog of *Sacramento Bee*, January 10, 2011.

42 Quoted in media release of January 10, 2011 issued by the Assembly Republican Caucus.

43 Quoted in Torey Van Oot, "GOP Leaders: No votes to put taxes on ballot," *CapitolAlert* blog of *Sacramento Bee*, January 10, 2011.

44 A special election would not have been confined to the tax extensions since any initiatives that had been certified as having sufficient signatures would also be on the ballot. (Certified initiatives go on the next statewide election, whenever that occurs.) There were two such initiatives, one relaxing term limits and the other imposing a $1/pack tax on cigarettes for cancer research.

45 Quoted in Shane Goldmacher, "Republicans won't offer own budget plan, lest they become 'the bad guys,'" *Los Angeles Times*, January 11, 2011.

46 Jann Taber, spokesperson for Senate Republican leader Bob Dutton, quoted in Kevin Yamamura, "Brown Countdown, Day 47: Democrats don't need GOP for tax vote, state's lawyers say," *Sacramento Bee*, February 26, 2011.

47 Quoted in Jim Sanders, "Pérez: 'No' to sidestepping GOP in tax extension vote," *Capital Alert* blog of *Sacramento Bee*, March 2, 2011.

48 *Howard Jarvis Taxpayers et al., v Debra Bowen, as Secretary of State, etc., Geoff Brandt, as State Printer, etc., Court of Appeal, Third Appellate District No. C060441, January 27, 2011*.

49 The next scheduled election—absent a special election in 2011—would have been the presidential primary set for February 2012. However, the legislature moved the primary to June 2012 to coincide with the state primary. So the legislative constitutional amendment (ACA 4) and—at this writing—two initiatives will be on the June 2012 primary ballot. One initiative proposes a tobacco tax earmarked for cancer research. The other proposes a relaxation of legislative term limits.

50 Legislative Analyst's Office, *The 2011-12 Budget: The Administration's Revenue Accrual Approach*, January 31, 2011.

51 On Table 5, the difference—in $ millions—between Brown's no-policy-change revenues for 2010-11 and his proposal for that year is $3,507 ($94,194-$90,687). For the next year, the difference is $6,183 ($89,696-$83,513). The revenue hike, combining the two is $9,690 for two years (about ($9.7 billion). The expenditure reduction for the two years is $584 in the first year plus $16,135 in the second for a total of $16,769 ($16.8 billion).

52 Quoted in John Myers, "Brown Dishes Jokes, Truth, to Locals," *KQED Capitol Notes*, January 19, 2011.

53 Quoted in Susan Ferriss, "Brown Countdown, Day 19: Home health care cuts face legal questions," *Sacramento Bee*, January 28, 2011.

54 Letter and attachment from State Auditor Elaine M. Howle to Governor Brown dated March 9, 2011.

55 Such agencies were authorized by the legislature in 1945 and permitted by voters to use property tax revenues in 1952. About 12% of property tax revenues go to redevelopment. There are complicated flows of such diverted property tax revenues by the agencies to locals—including school districts. But the state picks up the tab for about $2 billion per year diverted from K-14. Legislative Analyst's Office, *Governor's Redevelopment Proposal*, February 7, 2011.

56 Redevelopment agencies also have other sources of funds. About 83% of their revenues in fiscal year 2008-09 came from tax increment financing. Source: California State Controller, *Community Redevelopment Agencies Annual Report*, December 31, 2010.

57 A much smaller source of conflict with local governments involved the issue of mandates. Prop 4 (1979) and Prop 1A (2004) require the state to reimburse local governments of programs mandated on the locals by the state. However, if the legislature simply doesn't fund the mandate, locals are left with the choice of not operating the program or paying for it themselves. The proposed budget effectively suspended certain mandates that locals might have difficulty discontinuing, such as providing mail ballots to voters who request such ballots on a permanent basis.

58 A spokesperson for the Department of Finance stated that the proposal could "withstand any legal challenge." H.D. Palmer quoted in Kevin Yamamura, "Legislative counsel says Brown's redevelopment plan illegal," *CapitolAlert* blog of *Sacramento Bee*, May 3, 2011.

59 A Wall Street Journal/NBC poll at the time indicated that Americans generally disapproved of taking away collective bargaining rights for public workers but did favor worker concessions to help government budgets. See "WSJ/NBC Poll: Strong Support for Bargaining Rights," *Wall Street Journal* online, March 2, 2011.

60 Local governments, e.g., Orange County, California in the 1990s, the City of Vallejo, California in the 2000s, can declare bankruptcy under the existing legal framework.

61 The issue in Costa Mesa was a plan by the city council to privatize services and layoff a large fraction of city workers, as well as pensions. Litigation concerning the layoffs was still in progress at this writing.

62 The term "401k" refers to a section of the Internal Revenue Code. That section covers only private employees although there are other section numbers such as 403b and 457b that cover the public sector. However, the reference in the debates about public pensions commonly referred to 401k since that is what most people—who work in the private sector—understand.

63 Orange County in particular tried to undo a pension increase it had given to sheriff's deputies. A court ruling noted that even if the pension increase the County was trying to undo was imprudent, "imprudence… is not unconstitutional." Quoted in Kimberly Edds, "County takes deputies' pension fight to state Supreme Court," *Taxdollars* blog of *Orange County Register*, February 8, 2011.

64 See Liam Dillon, "The 401(k)'s Sticker Shock," *Voice of San Diego*, June 5, 2011, on the attempt by the City of San Diego to move to defined contribution and the discussion in that City of these points.

65 Quoted in Steve Harmon, "GOP senator: No pension reform, no vote on taxes," *Contra Costa Times*, January 24, 2011.

66 John Ehnes, executive director of CalSTRS, quoted in Timm Herdt, "State pension chiefs say cutting worker benefits would be illegal," *Ventura County Star*, March 2, 2011. See Little Hoover Commission, *Public Pensions for Retirement Security*, February 2011.

67 See Jeffrey Keefe, *Debunking the Myth of the Overcompensated Public Employee*, Economic Policy Institute Briefing Paper No. 276, September 15, 2010 (on public employment generally in the U.S.), http://www.employmentpolicy.org/sites/www.employmentpolicy.org/files/Debunking%20the%20Myth.pdf; Sylvia A. Allegretto and Jeffrey Keefe, *The Truth About Public Employees in California*, Policy Brief, Institute for Research on Labor and Employment, University of California-Berkeley, October 2010, http://www.irle.berkeley.edu/cwed/wp/2010-03.pdf; California Foundation for Fiscal Responsibility, *Comparing Public and Private Employee Compensation and Retirement Benefits in California*, Capitol Matrix Study, May 2011, http://www.fixpensionsfirst.com/comparing-public-and-private-employee-compensation-and-retirement-benefits-in-california/ ; CalPERS, "Pension Reform Proposals Raise Serious Concerns; Study Comparing Private and Public Benefits is Flawed," media release, May 12, 2011.

68 There are two legacy organizations that descend from the Prop 13 (property tax limitation) campaign of 1978. One—Peoples Advocate—filed an elaborate pension initiative in July 2011 and appeared to be fishing for a financial angel to fund a campaign. (Peoples Advocate kicked off the 2003 recall drive against Governor Gray Davis—but the funding for that drive came from other sources.) The other Prop 13 legacy organization—the Howard Jarvis Taxpayers Association—indicated it was not interested in taking on the pension issue in 2012.

69 Both quotes from Steve Yeater, "New Governor, Familiar Fight?," *KQED Capitol Notes*, January 31, 2001.

70 California State Controller, "*Statement of General Fund Cash Receipts and Disbursements, January 2011*," p. A2.

71 Legislative Analyst's Office, letter to State Senator Mark Leno with exhibits, February 10, 2011.

72 Quoted in Susan Ferriss, "Brown's Countdown, Day 39: Dutton says Senate GOP won't vote to place taxes on ballot," *Sacramento Bee*, February 17, 2011.

73 Quoted in John Howard, "Surprises loom as election debate picks up steam," *Capitol Weekly*, February 17, 2011.

74 Quoted in John Myers, "Question Time With Jerry Brown," *KQED Capitol Notes*, February 24, 2011.

75 Chancellor Robert Birgeneau quoted in John Loo, "Chancellor: UC Berkeley morphing into federal university," *CaliforniaWatch*, February 23, 2011.

76 Quoted in Jack Chang, "Jerry Brown says he's meeting with Republicans on taxes," *CapitolAlert* blog of *Sacramento Bee*, March 4, 2010.

77 John Coupal, president of the Howard Jarvis Taxpayers Association, weekly online newsletter, March 8, 2011.

78 The letter was made available on the web at http://www.scribd.com/doc/50227118/110307-letter

79 Wyatt Buchanan and Marisa Lagos, "GOP faction presses party's legislators on budget," *San Francisco Chronicle*, March 15, 2011.

80 Quoted in Kevin Yamamura, "Brown's Countdown, Day 70: An all-cuts budget may surface," *Sacramento Bee*, March 20, 2011.

81 Quoted in Wyatt Buchanan, "Gov. Brown: Tax vote will happen 'one way or another,'" *Politics* blog of *San Francisco Chronicle*, March 21, 2011.

82 Quoted in John Myers, "In Search of Budget Dénouement," *KQED Capital Notes*, March 23, 2011.

83 John Howard, "Tensions in organized labor over Brown's redevelopment plan," *Capitol Weekly*, March 21. 2011.

84 Jim Miller, "RDA's issue hundreds of millions in bonds," *PE Politics* blog of *Riverside Press-Enterprise*, March 21, 2011.

85 As it happened, A. Alan Post, the legendary Legislative Analyst who successfully opposed the Reagan spending cap plan in the 1970s, died at around the time the new cap initiative was filed.

86 California Field Poll, "More California Voters Now View Public Pension Benefits as Too Generous," March 17, 2011. Note the misleading title of the release. In fact, as the text discusses, more voters thought the benefits were about right or not generous enough. The "more" in the title refers to the fact that relative to October 2009, the proportion saying "too generous" had risen.

87 George Skelton, "There's blame to go around," *Los Angeles Times*, March 31, 2011.

88 Quoted in "Jerry Brown: Hug a Republican," *CapitolAlert* blog of *Sacramento Bee*, April 6, 2011.

89 California Field Poll, "Voters Approve of Governor Brown's Job Performance by Greater Than Two to One Margin," March 22, 2011.

90 Quoted in "Bob Dutton: Jerry Brown's wife 'yelled' at him," *CapitolAlert*, March 31, 2011.

91 Quoted in David Siders, "Jerry Brown defends first lady in LA interview," *CapitolAlert* blog of *Sacramento Bee*, April 10, 2011.

92 Barbara Anderson, "Valley First 5s to sue state over fund grab," *Fresno Bee*, April 5, 2011.

93 The Sacramento First Five commission cut back programs in early May.

94 UC-San Diego chancellor Marye Anne Fox quoted in Pauline Repard, "UCSD, Cal Western talks for law school suspended," *San Diego Union-Tribune*, April 6, 2011.

95 Gene Block, "Cuts to higher education: The Master Plan turncoats," *Los Angeles Times*, April 17, 2011. Note that titles to op eds are not always composed by the authors. The newspaper's editors may create the titles. It is unclear whether Block intended to label the Republicans as "turncoats" since no such language appears in the text of the op ed.

96 Kevin Yamamura, "Brown's Countdown: Day 94: Teachers seek tax hike without an election," *Sacramento Bee*, April 13, 2011.

97 David Siders, "Jerry Brown mulling tax extension before public vote," *CapitolAlert* blog of *Sacramento Bee*, April 8, 2011.

98 Quoted in Josh Richman, "Lockyer: Let further cuts start in GOP districts," *Political Blotter* blog of *Contra Costa Times*, April 26, 2011.

99 Torey Van Oot, "Steinberg considers cuts targeting GOP districts," *CapitolAlert* blog of *Sacramento Bee*, April 27, 2011.

100 Gil Duran quoted in Jim Miller, "Efforts to restore new cities' funding under way in Capitol," *Riverside Press-Enterprise*, July 7, 2011.

101 Various other numbers were used in the debate over the above-estimate receipts. The figures in the text come from California State Controller, "Statement of General Fund Cash Receipts and Disbursements: April 2011," May 2011.

102 Quoted in John Myers, "Teachers: More Money for Schools. GOP: Okay," *KQED Capital Notes*, May 9, 2011.

103 Quoted in Torey Van Oot, "Brown, Steinberg differ on how soon election should come," *Capital Alert* blog of *Sacramento Bee*, May 16, 2011.

104 Dutton and Pérez quoted in Torey Van Oot, "Rapid Response Roundup: Brown's May budget revision," *CapitolAlert* blog of *Sacramento Bee*, May 16, 2011.

105 Public Policy Institute of California, *Californians & Their Government: May 2011*, June 1, 2011.

106 California Field Poll, "Voters Don't Have Great Confidence in Governor or Legislature to Resolve Budget Deficit," June 15, 2011. In the Field Poll, 49% favored an election; 45% opposed it, and the remainder didn't know.

107 Quoted in David Siders, "At prayer breakfast, Jerry Brown asks to consider 'lost souls,'" *Sacramento Bee*, May 19, 2011.

108 When the pay-forfeit provision was enforced by state controller John Chiang after June 15 (see below in the text), he interpreted Prop 25 to require a budget that was "balanced" by citing a provision passed by voters in 2004 as part of Governor Schwarzenegger's budget financing propositions of that period. See David Siders, "Chiang to withhold lawmaker pay if budget deadline passes," *Capital Alert* blog of *Sacramento Bee*, June 2, 2011.

109 Quoted in David Siders, "Chiang to withhold lawmaker pay if budget deadline passes," *CapitolAlert* blog of *Sacramento Bee*, June 2, 2011.

110 Quoted in Kevin Yamamura, "John Chiang's pay blockage upends budget talks," *Sacramento Bee*, June 22, 2011.

111 Quoted in Dave Paresh, "Niello's pension reform initiative enters signature-gathering phase," *State Worker* blog of *Sacramento Bee*, May 24, 2011 (updated version).

112 Quoted in David Siders, "Jerry Brown readies 'blue pencil' to keep spending cuts intact," *Capital Alert* blog of *Sacramento Bee*, June 2, 2011.

113 Quoted in Anthony York, "Jerry Brown says budget talks hit a new snag," *PolitiCal* blog of *Los Angeles Times*, June 7, 2011.

114 SEIU California State Council executive director David Kieffer quoted in Kevin Yamamura, "Union chief says Jerry Brown's tax vote is 'fraught with peril,'" *Sacramento Bee*, June 9, 2011.

115 Senator Bob Huff quoted in Torey Van Oot, "Senate OKs local tax authority bill after 'tax bridge' falls short," *CapitolAlert* blog of *Sacramento Bee*, June 10, 2011.

116 Christina Jewett, "Nursing homes reach last-minute deal on Medi-Cal cut," *California Watch*, June 22, 2011.

117 Quoted in Shane Goldmacher and Anthony York, "California Democrats pass budget with taxes, cuts and tricks," *Los Angeles Times*, June 16, 2011.

118 Quoted in John Myers, "Brown's Budget 'Fuzzy Zone,'" *KQED Capital Notes*, June 13, 2011.

119 Quotes from David Siders, "Jerry Brown says he'll 'move heaven and earth' for budget deal," *CapitolAlert* blog of *Sacramento Bee*, June 16, 2011 and official governor's message of June 16, 2011.

120 On June 18, two days after the veto, Brown said at a public gathering that "I may be in initiative circulation… in the next few months." Quoted in Anthony York, "Jerry Brown warns GOP legislators he may go around them," *Los Angeles Times*, June 18, 2011.

121 Kevin Yamamura, "Chamber CEO says still time for 'comprehensive' deal," *CapitolAlert* blog of *Sacramento Bee*, June 20, 2011.

122 Quoted in Torey Van Oot, "Steinberg to halt confirmation of Brown's appointees," *CapitolAlert* blog of *Sacramento Bee*, June 17, 2011.

123 Quoted in David Siders, "Jerry Brown calls Steinberg action 'small price to pay,'" *CapitolAlert* blog of *Sacramento Bee*, June 17, 2011.

124 Quoted in Kevin Yamamura, "Steinberg raises legal questions about withholding pay," *CapitolAlert* blog of *Sacramento Bee,* June 20, 2011.

125 Republican senator Bob Huff quoted in Kevin Yamamura, "Senate GOP budget vice chair opposes pay blockage," *CapitolAlert* blog of *Sacramento Bee,* June 21, 2011.

126 Quoted in Kevin Yamamura, "Treasurer Bill Lockyer believes Dems' budget not financeable," *CapitolAlert* blog of *Sacramento Bee*, June 16, 2011.

127 Howard Jarvis Taxpayers Association, media release of June 21, 2011.

128 Quoted in Shane Goldmacher and Evan Halper, "California Controller John Chiang's unlikely turn in the spotlight," *Los Angeles Times*, June 23, 2011. See also George Skelton, "Bad Policy, but it may work," *Los Angeles Times*, June 23, 2011.

129 Statement released by Darrell Steinberg, June 27, 2011.

130 Quoted in Kevin Yamamura, "Budget deal by Brown, Dems scraps tax election, may trigger cuts," *Sacramento Bee*, June 28, 2011.

131 The governor used his line-item veto to reduce General Fund expenditures by $23.8 million. Much of his vetoing fell outside the General Fund.

132 However, the legislature instructed school districts effectively to ignore the possibility of the trigger firing, assume

the same level of funding as the prior year, and to avoid layoffs in planning their 2011-12 budgets. Not surprisingly, school district administrators protested. The superintendent of the large LA Unified School District said the constraint would have "detrimental effects on all students." John Deasy quoted in Connie Llanos, "LAUSD's Deasy wants funding measures repealed," *Los Angeles Daily News*, July 29, 2011.

133 Quoted in Jim Sanders, "Lockyer gives thumbs up to Democrats' budget deal," *CapitolAlert* blog of *Sacramento Bee*, June 28, 2011.

134 Quoted in Anthony York, "Jerry Brown laments 'atrophying' political process," *PolitiCal* blog of *Los Angeles Times*, August 2, 2011.

135 Brown had said in early April 2011 that tuition at UC could rise to at least $20,000. See "Brown warns of more UC tuition hikes," *KGO* website, April 6, 2011.

136 In effect, redevelopment agencies could continue if they paid a price to the state. Some agencies did agree rather than be terminated. There was also the possibility of a referendum challenging the car fee but no such filing had been made as of this writing.

137 The bill would have forbidden piece-rate type payments (payments per signature) and required that signature gatherers be paid by the hour. Since such gatherers are hard to monitor, the bill would have created what economists call an "agency problem," making the process more costly.

138 The radio ad was apparently aimed at an initiative being circulated—a so-called "paycheck protection" law—that would make it more difficult for unions to use dues money for political purposes. Voters have rejected such initiatives in elections in 1998 and 2005.

139 The legislative counsel affirmed this interpretation in the case of the "Amazon tax," the budget element that required out-of-state online retailers to collect and remit California sales tax. There would be a period from July 1 to the date the referendum petition was certified as having sufficient signatures in which the tax would be in effect. It would then be suspended until the election. See letter of the Legislative Counsel Bureau of Senator Joel Anderson of July 22, 2011. Amazon was—in any case—refusing to comply so that once its payments were due, there would presumably be litigation on whether the money was owed.

140 The case—*Brown vs. Rincon Bank of Luiseno Mission Indians*—had challenged a revenue sharing deal Governor Schwarzenegger had tried to impose on a particular tribe. The decision, favoring the tribe, potentially undermined other deals with tribes. See John Myers, "State Poised to Lose Indian Casino Cash?," *KQED Capital Notes*, July 8, 2011.

141 As part of realignment, various state functions and corresponding revenues were shifted to local governments. That step—by reducing the state budget—was viewed by those writing the budget as reducing the state's funding requirements for K-14 under Prop 98. Normally, a legal challenge of that type might be brought by teacher unions. But—as noted in the text—unions had received teacher layoff protections as part of the budget deal and so did not challenge the outcome.

142 Even before the 2011-12 budget was enacted, courts were ordering the state to spend more on various programs. See, for example, Bob Egelko, "Judge orders California to boost foster payments," *San Francisco Chronicle*, June 1, 2011.

3

GOVERNANCE IN CALIFORNIA:

A MASSACHUSETTS PERSPECTIVE

MICHAEL DUKAKIS

Michael Dukakis is the former governor of Massachusetts and
visiting professor of Public Policy, UCLA Luskin School of Public Affairs

INTERVIEWED BY DANIEL J.B. MITCHELL

Michael Dukakis (hereinafter MD): I spent twelve years in the governor's office in Massachusetts, and for the past fifteen years you and I have been teaching the course in *California Policy Issues* here at UCLA. Both experiences have given me a unique opportunity to analyze how two important states in the country try to govern themselves. They indicate how relatively more difficult it is for governors and legislators in California to do what governors and legislators try to do in Massachusetts.

Daniel J.B. Mitchell (hereinafter DM): Are you saying it is easy to enact public policy in Massachusetts? Is that a function of the Great Recession or something else?

MD: Don't get me wrong. Developing and implementing public policy is no day at the beach in either state or, for that matter, in states generally. That is particularly true when the country has been struggling to get itself out of the worst recession since the Great Depression. But governing at the state level during or after a recession is not a new experience for either California or Massachusetts.

DM: What was the business cycle like when you were governor of Massachusetts?

MD: I went through three recessions during my tenure as the governor of Massachusetts and I have witnessed at least two more during my teaching stints here at UCLA. The recession of the mid-1970s hit Massachusetts particularly hard just as I was taking office and had a good deal to do with my losing my bid for reelection in 1978. We had the second highest unemployment rate in the nation—12.2 percent. Our traditional industrial base which relied heavily on shoes and textiles had fallen apart. High tech was still in the future. And unemployment in our older industrial communities was at Depression-era levels.

DM: You first came to UCLA in the mid-1990s. At that time, the U.S. had recovered from a mild recession in the early 1990s but it was deep and long-lasting in

California. What were your impressions of California at that time?

MD: Kitty and I arrived at UCLA in the winter of 1996. The entire country had a recession in the early 1990s, but California's, as you say, was deeper and longer for a lot of reasons. For one thing, as the Cold War wound down, defense spending began declining, and California depended heavily on federal defense and aerospace spending for much of its economic growth. You have a chart that you have shown in class in the past that indicates that California shifted to slower growth after 1990 compared to its prior decades of military-related fast growth.

DM: Pete Wilson was governor at the time you came to UCLA. Do you have a sense of what tools he had available to deal with the economic condition of the state?

MD: I don't think there was any question that the tools available to a governor in Massachusetts to deal with the situation were somewhat broader and more effective than what California governors such as Wilson typically have available to them. Massachusetts used to have a very weak governorship, but not anymore.

DM: There has been much discussion of the need for governmental reform in California. How did Massachusetts change its public institutions?

MD: When I first arrived in the Massachusetts legislature in the early 1960s, I not only found myself serving in one of the three or four most corrupt states in the country. At that time governors and other state constitutional officers only served for a term of two years. The governor and lieutenant governor did not run as a team and could represent different parties. In fact, they often began running against each other for governor the day after inauguration day.

DM: As you know, California still has that system. And when the governor is outside the borders of California, the lieutenant governor becomes the acting governor, a remnant of the early days of the state when there were no telephones and communications over long distances were difficult.

MD: In addition to the governor/lieutenant governor arrangement in Massachusetts, legislators had no staff and no offices. Since we didn't have the electronic roll call, every roll call in what was then a 240 member lower branch house took forever. And with the exception of the Ways and Means committees, which are the budget committees in Massachusetts, no committee had staff.

DM: At one time, California governors had a two-year term. Now, of course, it is four with term limits of two terms. What was the situation in Massachusetts?

MD: A newly elected governor not only had just two years to try to accomplish something. He—we still haven't had a "she" as governor in Massachusetts—often had to govern through agency heads who had been appointed by his predecessor for terms deliberately designed to overlap his or through boards and commissions made up of members serving staggered terms to the same effect.

DM: California governors do appoint cabinet heads. I assume that was true in Massachusetts.

MD: No. The governor had no cabinet. And even when he got the opportunity to replace a department head, he had to have the appointment approved by the executive council, a relic from colonial days made up of eight people elected from districts around the state. To say that the council gave its members opportunities to abuse the governmental process would be a gross understatement. In the 1960s alone, five of the eight went to jail.

DM: Presumably, that situation created a push for reform. Did it?

MD: Fortunately, for those of us who were elected to the governorship in the 1970s and beyond, all of this had changed dramatically. The decade of the 1960s brought a strong public reaction to all of the skullduggery that was taking place in state government.

DM: In California, when there is a strong public reaction to a government problem, someone comes up with a ballot proposition.

MD: The initiative process in Massachusetts which, while more difficult than California's, can often be used effectively and was in this case. State constitutional officers were given four-year terms. Governors and lieutenant governors ran as teams. The powers of the executive council were drastically curtailed, and the governor was given executive reorganization authority to go along with an earlier constitutional amendment which had already given him the line-item veto.

DM: So except for the governor/lieutenant governor running as a team, the change was similar to what California had: four-year terms and a line-item veto for the governor.

MD: Yes. But Massachusetts went further. State government was reorganized so as to give the governor a genuine cabinet system similar to California's with eleven cabinet secretaries. But in Massachusetts, they were not subject to confirmation by anyone. Now in Massachusetts, when a governor picks his cabinet secretaries, they take office with him, and neither the executive council nor the State Senate plays any role in their appointment or approval. On Day One of his administration, the governor and his cabinet can go to work.

DM: California has imposed supermajority legislative votes for tax increases since Prop 13 of 1978. And until 2010, it had a two-thirds vote requirement for any budget, even one without tax increases. Are there supermajority rules in Massachusetts?

MD: Taxes and budgets can be raised and approved by simple majority vote of the legislature.

DM: In California, general obligation state bonds—the kind often used for infrastructure finance—cannot be issued without a vote of the people. Is that true in Massachusetts?

MD: State bond issues need only a two-thirds vote of the legislature which is rarely difficult to get. There is no need to go to the voters for approval of bond issues.

DM: Like all states except Nebraska, California has a two-house legislature. Sometimes there is conflict between the Assembly and the Senate, even when both are controlled by the same party. Do you have similar problems in Massachusetts?

MD: Legislative committees, with the exception of the Ways and Means committees, are joint with House and Senate co-chairs. The joint chair arrangement simplifies the legislative process significantly. Also, the governor appoints all judges for life, subject to approval by the executive council, not the legislature.

DM: Why did the citizens of Massachusetts take such drastic action in the 1960s?

MD: Clearly, they had come to the conclusion that the old Progressive era solution to public corruption that involved the appointment of numerous boards and commissions designed to deny chief executives a broad measure of authority not only hadn't stopped corruption; they had made government and governors unaccountable for what was going on.

DM: In a way, you have a divergence at this point between the two states. California is still under the sway of early 1900s Progressivism. So whenever we have a governance problem, the solution chosen in California is to put checks on elected officials through ballot initiatives, term limits, and the like.

MD: The 1960s reforms in Massachusetts were designed to change that approach; to give governors the tools and the time to do the job; and to be held accountable at the polls four years later.

DM: It is interesting to note that despite the divergence, there was also a similarity. In California, the 1960s saw a reform of the legislature from part-time to full-time through the ballot proposition process. The idea was to professionalize the legislature at a time when the state was embarked on substantial infrastructure projects: freeways, water projects, expansion of the three higher educational systems.

MD: The Massachusetts reforms also were designed to modernize and equip the legislature for serious public policy making. While legislative terms in both the House and Senate remained two year terms, the electronic roll call, committee consolidation, offices and staff for legislators and for their committees all arrived at about the same time. Massachusetts finally decided that it wanted a strong executive and a strong legislature, and, curiously enough, it was California that was our model.

DM: You are referring to the era in California of Governor Pat Brown and powerful Assembly Speaker Jesse Unruh.

MD: The California governorship—by comparison with the one we had prior to the 1960s reforms—was a strong one. And the legislature, particularly under the strong hand of Speaker Jesse "Big Daddy" Unruh, was the envy of the nation—well equipped, well staffed and responsible for enacting legislation that was widely admired and copied by other states across the country.

DM: What in California was so much admired?

MD: California's schools were thought to be the best in the country. The community college system began in California as the "junior college" back during the 1920s and 1930s and was the basis for community college systems in every state after World War II. The state's Master Plan for public higher education of 1960 with its guaranty of virtually free higher education was widely copied. And the California freeway system was a planning and engineering marvel for most of us and the model for the national interstate highway system.

DM: It is such a contrast with the current period in which California is routinely cited as a state with a government in dysfunction.

MD: California not only appeared eminently governable in the 1960s, it was doing things that many of us at the state level in other states could only hope to achieve over time. And it was doing them in ways that seemed to work with great success. Interestingly enough, it didn't seem to make any difference which party controlled the governorship and/or the legislature. Republican Governor Earl Warren (1943-53) was considered one of the most successful governors in the country—the father of the freeway system and one of the few governors that came close to pushing a universal health plan through his legislature. Democrat Pat Brown (1959-67), father of Jerry, was also admired and respected for the enormous strides California made under him in building its infrastructure and educating its students. And both achieved these gains with administrations that had a reputation for competence and integrity.

DM: So what has changed since the 1960s?

MD: Not much has changed in Massachusetts since the 1960s reforms. The governorship and the legislation institutionally remain very strong. Although the state has not been corruption free—a recent Speaker of the House has just been convicted of graft—it has one of the toughest conflict of interest laws in the country, a strong and active ethics commission, and a government a lot cleaner and more competent than the one I entered as a young legislator back in the early 1960s.

DM: So basically, the Massachusetts approach has been to rely on the election process to fix problems. If voters don't like what an elected official has done, they can vote for someone else the next time around.

MD: Public officials, including governors, can now be held fully accountable and can't blame their inadequacies on an antiquated government structure that makes it impossible for them to govern.

DM: How about recent economic performance of the two states?

MD: While Massachusetts has struggled—like all states—through the aftermath of the Great Recession, its economy is doing a lot better than most other states. Its unemployment rate is substantially lower than the national average and much lower than California's.

DM: And in terms of state government response to the economic slump?

MD: California still retains the legacy of the Progressive era in the form of too many boards and commissions at both the state and local level that get in the way of performance and accountability. It has struggled through a period when it couldn't get its fiscal house in order under two governors, one a Democrat (Gray Davis, who was recalled) and one a Republican (Arnold Schwarzenegger who replaced Davis). Fortunately, the state's voters in November 2010 finally repealed a Depression-era requirement that state budgets be approved by a two-thirds vote of the legislature. Under Jerry Brown, the legislature has met its budget approval deadline for the first time in several years. That change alone has been a huge step forward.

DM: So what more does California need to do?

MD: Two barriers to effective and accountable government remain, however, and both are the result of Proposition 13 of 1978. The first is the requirement that taxes can only be raised by the legislature with a two-thirds vote. As anyone knows who has tried to come up with more needed revenue, that is an exceedingly difficult thing to do. It is particularly difficult if one has a minority party that is almost pathologically incapable of voting to raise taxes even for the most important priorities. In fact, it appears that in Republican districts in California, any Republican that votes to increase taxes will be subject to immediate recall. That is a fact of political life that the particular Assemblyman or Senator can't possibly ignore.

DM: Voters have established an independent commission to redraw the legislative and congressional districts in a nonpartisan way. The idea was to create more competitive districts in which either party might win. Is that going to help?

MD: Will redistricting reform change things on the budget? Only if it produces legislators willing on occasion to face the tax music—and that probably means more Democrats.

DM: What is the other Prop 13 problem you see?

MD: Proposition 13, as just about everybody in California knows, puts very severe limits on the ability of municipalities to raise property taxes. Other than certain "parcel" taxes, they really can't change property taxes beyond 1% of assessed value. Moreover, Prop 13 effectively freezes assessed valuations at the point when the real estate is sold, and allows a bare two percent annual increase in valuations until the property is sold at sometime in the future. Not only does that mean that identical houses on the same street pay wildly differing property tax bills; it gives property owners a reason for resisting any change in Proposition 13 because they will lose their artificially depressed valuation in an era when valuations over time have tended to go up, especially in California.

DM: Didn't Massachusetts have its own version of the "taxpayer revolt" after California's Prop 13?

MD: Massachusetts has not been immune to the tax cut fever, especially when it comes to property taxes. Prior to the passage of Proposition 13 in California, Massachusetts property taxes were among the highest in the country. Inspired by California, Massachusetts proceeded to pass its own property tax limiting initiative—Proposition 2½. But Prop 2½ was a lot more reasonable than Prop 13 in requiring all valuations to keep pace with inflation and allowing annual increases in tax bills of 2½ percent and annual increases in valuations of 2½ percent—something closer to the long-run general rate of inflation than California's two percent.

DM: When Prop 13 was passed, the state stepped in to an extent and bailed out local governments—especially school districts—that had depended on the local property tax. It moved the locus of power to Sacramento, since that was where the money was. Did you have a similar outcome in Massachusetts?

MD: In both states, of course, the sharp capping of property tax increases shifted a lot of responsibility for local and school finance to the state government. But here the difference between the states widens dramatically. In Massachusetts, a simple majority in the state legislature can raise taxes and a two-thirds vote of the legislature can issue state bonds for infrastructure projects. Both steps have been taken from time to time by administrations of both parties, and the result is a state that has steered its way fairly effectively through the Great Recession.

DM: Specifically, how was that done?

MD: Massachusetts dealt with its fiscal needs on the revenue side by closing loopholes and raising the state sales tax. It has enacted and achieved near universal health care in the state with an individual mandate strongly championed by Mitt Romney when he was governor with the support of a Democratic legislature and fees imposed on employers who refuse to insure their employees.

DM: It is interesting to note that while Massachusetts was imitating California in the 1960s regarding governance reforms and in the late 1970s on the property tax, California tried to imitate Massachusetts by implementing universal health care. You will recall that Governor Schwarzenegger tried to copy the Romney-Massachusetts plan in 2007 but failed to have it enacted.

MD: Schwarzenegger's plan required a tax on employers who did not provide private insurance and certain other taxes. Neither of those steps was permissible in California without a two-thirds vote of the legislature because they require a two-third legislative vote under Prop 13. At this juncture, even the handful of Assembly and Senate Republicans required to make up a two-thirds majority can't seem to be found.

DM: That takes us back to the state budget.

MD: Under the circumstances, Governor Brown had to face the choice of an additional round of very tough spending cuts or his own initiative on the ballot to extend existing temporary taxes which have expired. Neither route was a particularly pleasant one.

DM: Brown wasn't proposing that the Republicans vote directly for a tax extension. It appeared he realized that there was no way they would vote directly for the tax extensions themselves. He proposed that they provide the necessary two-thirds simply to put the issue on the ballot. Voters could then have voted for the extensions or not.

MD: Requiring governors to go to the ballot box every time they want to raise a tax or a fee is a strange way to govern.

DM: Would California voters have voted to tax themselves through the tax extensions if Brown had gotten his proposition?

MD: When the voters of Los Angeles were asked in 2008 to raise the local sales tax to support improved public transportation, they did so.

DM: There is talk that various groups, possibly in cooperation with the governor, might file initiatives to raise taxes. Do you think voters might approve some kind of tax increase?

MD: Time will tell if voters statewide will give Brown credit for dealing quickly with the spending side of the ledger and give him the revenue he needs to avoid billions in further budget cuts, especially for public education.

DM: Jerry Brown's father, Pat Brown, was noted for his infrastructure improvements. And Governor Schwarzenegger pushed various bond propositions for infrastructure which voters approved in 2006. Might we see additional moves in that direction, apart from the immediate budget problems of California?

MD: The state's fiscal problems don't make it impossible for governors to act on other important priorities, even while they are wrestling with the consequences of Proposition 13. Take high speed rail, for example. A majority of Californians have already voted for a modern, statewide high speed rail system that can get travelers from Los Angeles to San Francisco in two hours and forty minutes and from Los Angeles to San Diego in less than an hour. Not surprisingly, there have been some dissenters—those who opposed the plan in the first place and some of those through whose backyards the new rail lines will pass.

DM: Would Governor Brown support the continuance of the high-speed rail plan? When he was in office in the late 1970s and early 1980s, he shied away from the kind of big projects his father had implemented.

MD: Jerry Brown now is a strong supporter of the rail plan, but it is hard for me to see how he is going to drive it forward if he tries to do so through another California independent authority—this time the California High Speed Rail Authority. The Authority itself has a fine board, some of whom I know personally. If I were governor, however, I would want to have direct control of the agency responsible for the project, headed by a cabinet secretary who reports directly to me, and that means Caltrans.

DM: We tend to think of Caltrans as a road agency. Could it do a major rail construction project?

MD: Caltrans already has a rail division that is deeply involved in both commuter rail and intercity Amtrak train service within California. It has all the tools it needs to work with the affected communities, acquire the necessary land and rights of way, plan and engineer projects, get them out to bid, and supervise construction through its regional engineers.

DM: So you think high-speed rail is still possible despite the opposition?

MD: Just because the state has to wrestle with limitations on it fiscal flexibility—which seem absurd to many of us who have worked in state government—doesn't mean that its governor and legislature can't govern and execute effectively in other areas, especially when it involves the state's infrastructure. In fact, it is in times of recession that investing in infrastructure makes the most sense. The projects can be bonded. Many of them are eligible for substantial amounts of federal funding under existing law. Contractors are hungry and bidding low, and there are plenty of construction workers looking for work.

DM: If you had to choose one reform for California governance, what would it be? We have already put redistricting reform in place and only a simple majority is needed for passing a budget. It appears there may be some proposal on the ballot to relax term limits.

MD: It appears clear that for the foreseeable future the two-thirds requirement for raising tax revenue will continue to face governors and legislators in California. That requirement is not an impossible burden, but it will make effective governance a lot more difficult than it would be with the simple majority vote. In most states, a simple majority to raise taxes is all that is needed.

4

LEAVES THAT PAY:

EMPLOYER AND WORKER EXPERIENCES WITH PAID FAMILY LEAVE IN CALIFORNIA

RUTH MILKMAN

Ruth Milkman is a sociologist of labor and labor movements who has written on a variety of topics involving work and organized labor in the United States, past and present. She was a sociology professor at UCLA for 21 years and directed the Institute for Research on Labor and Employment from 2001 to 2008. She is currently a Professor of Sociology at the CUNY Graduate Center and at the Joseph F. Murphy Institute for Worker Education and Labor Studies, where she also serves as Academic Director. Dr. Milkman is currently at work, with Eileen Appelbaum, on a book about the history and impact of California's paid family leave program, focusing on its impact on employers and workers.

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As family and work patterns have shifted over recent decades, the demand for time off from work to address family needs has grown rapidly.[1] Women—and increasingly men as well—often find themselves caught between the competing pressures of paid work and family responsibilities. These pressures can be severe, especially when employees become parents or when serious illness strikes a family member. "Work-family balance" has become an urgent but elusive priority for millions of Americans, driven by high labor force participation rates among mothers and the caregiving needs of an aging population.

Yet the United States is notoriously lacking in public policies that support workers who need time off to attend to family needs. Across the industrialized world, longstanding government-sponsored programs provide mothers—and, in many countries, fathers as well—with wage replacement and job security for extended periods immediately before and after the birth of a new child. Generous paid sick leave and vacation policies are also widespread, and some governments make provision for eldercare as well (see Gornick and Meyers 2003).

By contrast, the only major U.S. legislation to address these issues is the 1993 Family and Medical Leave Act (FMLA), which guarantees up to twelve weeks of job-protected leave, with continuing fringe benefits, for both men and women who need time off from work to attend to their own medical conditions or for family care. However, FMLA's coverage is limited to only about half of all workers, and less than a fifth of all new mothers (Ruhm 1997, Waldfogel 2001).[2] And because the leaves FMLA provides are unpaid, even workers who are covered often cannot afford to take advantage of it.

In the absence of government provision for wage replacement during family leave, many U.S. workers rely on a patchwork of employer-provided benefits to make ends meet, such as paid sick leave, vacation,

disability insurance, and/or parental and family leave. However, such employer-provided benefits are by no means universally available. Most managers and professionals, and many workers covered by collective bargaining agreements, often do have access to some form of wage replacement during a family leave. However, vast sectors of the U.S. workforce lack even paid sick days or paid vacation, and paid parental or family leave is even rarer. The situation is particularly acute for low-wage workers, as well as the growing numbers of independent contractors, freelancers, and others who lack any stable connection to an employer.

CALIFORNIA'S PAID FAMILY LEAVE

Against this background, California's passage of the nation's first comprehensive Paid Family Leave (PFL) program on September 23, 2002 was a historic breakthrough.[3] Benefits provided by this legislation became available to most working Californians on July 1, 2004. The law provides eligible employees up to six weeks of wage replacement at 55 percent of their usual weekly earnings, up to a maximum benefit of $987 per week in 2011, when they take time off from work to bond with a new biological, adopted, or foster child; this benefit is available to fathers as well as mothers during the first year after a child is born or placed with the family.[4]

California's program also offers wage replacement during leaves to care for certain seriously ill family members (parent, child, spouse, or registered domestic partner). For both bonding and care leaves, covered workers can receive up to six weeks of partial pay during any twelve-month period. The six weeks of leave can be continuous or intermittent.

Program's benefit levels are indexed in relation to the state's average weekly wage. PFL builds on California's longstanding State Disability Insurance (SDI) system, which has provided income support for employees' medical and pregnancy-related leaves for many years. It is available to biological mothers for six weeks *in addition to* the SDI benefits they may receive during pregnancy leave.[5] Unlike SDI benefits, income from PFL has been deemed taxable by the Internal Revenue Service.

PFL is structured as an insurance benefit, like SDI. There are no direct costs to employers: the wage replacement benefit is funded entirely by an *employee* payroll tax (a 1.2 percent tax that finances both SDI and PFL). Workers can claim PFL benefits after a one-week waiting period, by submitting appropriate documentation (including certification from a health care provider) to the state's Employment Development Department.

Employers may require workers to take up to two weeks of earned (unused) vacation before collecting PFL benefits; in such cases, this vacation period runs concurrently with the one-week waiting period required under the PFL program. PFL does not provide job protection or guarantee the continuation of fringe benefits, although in many cases leave-takers will have these additional protections under the FMLA or the California Family Rights Act (CFRA). For those who are covered by these laws, the PFL leave and the FMLA/CFRA leave must be taken concurrently.

Unlike FMLA, California PFL—except for government workers—is nearly universal in its coverage; apart from some self-employed persons, virtually all private-sector (and nonprofit sector) workers are included, regardless of the size of the employer. California public employees may be covered if the agency or unit that employs them opts into the program, but most are not eligible for PFL. Workers need not have been with their current employer for any specific period of time to be eligible for PFL; they need only to have earned $300 or more in an SDI-covered job during any quarter in the "base period," which is five to seventeen months before filing a PFL claim.

OUR RESEARCH ON PFL'S IMPACT

At this writing, California's PFL program has been in operation for over six years. It has a track record of sufficient length to permit a serious evaluation of how well it is working. How well has the program served the growing numbers of low-wage workers, many of them female, who have limited access to employer-sponsored fringe benefits providing paid time off? How widespread are awareness and usage of the program? What has been the experience of workers who have used the program? Has it supported infant and maternal health? Have fathers as well as mothers made use of the program to bond with a newborn? What has been the experience of employers—has the program been good business practice for them? Has it improved employee retention and thus reduced costs associated with recruiting and training new workers? These are among the questions we address in this chapter.

EMPLOYER SURVEY

To explore these issues, we conducted detailed surveys of California employers and employees in 2009 and 2010. The employer survey is of 253 establishments, drawn from a Dun and Bradstreet list of all worksites in the state. This sample excluded public-sector sites, but includes both private companies and nonprofit organizations, whose managers were interviewed by telephone in the first five months of 2010. The sample was stratified by size to facilitate analysis of the impact of paid family leave on small businesses as well as large companies. All results reported below are weighted to adjust for the overrepresentation of large firms in the sample and to adjust for nonresponse.

EMPLOYEE SURVEY

The employee survey was a screening survey that included 500 individuals who had experienced an event in the last four years (becoming a parent or having a close family member become seriously ill) that could have triggered a paid family leave. It was conducted by telephone, with interviews in both English and Spanish, between December 2009 and February 2010. Fifty of the 500 respondents lived in households whose only telephone was a cellular phone; on the average, these respondents were younger and had lower incomes than the rest of the sample. The results reported here are weighted to adjust for the number of telephones in each household, which affects the probability of selection in random digit dialing.

Although it was not intended to be a representative sample, but rather one that captured individuals who were potentially eligible for PFL, the screening survey sample is demographically diverse in regard to age, gender, race and ethnicity, and immigrant status, like the California population. It includes workers across the economic spectrum as well, with diversity in levels of education and income. One of the most salient features of the worker sample, and one that we discuss extensively in this report, involves the contrast between what we call "high-quality jobs" and "low-quality" jobs. The former pay more than $20 an hour *and* provide employer-paid health insurance. "Low-quality jobs" fail to meet that standard. In our sample of 500 workers, 30 percent (149 respondents) held high-quality jobs and 70 percent (351 respondents) held low-quality jobs.

VOTER OPINION SURVEY

We also report here on a Field poll of 1001 registered voters in California conducted in August 2011. That

poll included questions about awareness of the PFL program, which our previous research found to be quite limited.[6] The Field poll results enable us to analyze the current level of awareness of PFL among various demographic groups in the state. We draws on all three surveys to assess the impact of California's pioneering PFL program on employers and workers.

PAID FAMILY LEAVE AND CALIFORNIA BUSINESS

Prior to the passage of the legislation that created California's Paid Family Leave (PFL) program in 2002, opponents lambasted it as a "job-killer," with potentially catastrophic effects on businesses in the state. The business community was vehement in its opposition to PFL, predicting that it would impose extensive new costs on employers, and involve a particularly serious burden for small businesses. Opponents succeeded in modifying the original PFL bill, which had provided for twelve weeks of paid leave, with costs evenly divided between a tax on employers and one on employees. In response to business lobbying, the employer tax was eliminated and the benefit was reduced to six weeks in the final bill.

The PFL program that was ultimately passed into law is fully funded by employees' payroll tax contributions, with no direct costs to employers. However, business opponents continued to argue that the expenses associated with covering the duties of absent workers—such as overtime pay and training costs for co-workers asked to perform the tasks of those on leave, or costs for temporary replacements—would be prohibitive for employers. The president of the California Chamber of Commerce, for example, stated in 2002, shortly after the bill's passage, that PFL would mean that businesses would have no control over their workforce or the hidden costs associated with replacing an absent worker (Edds 2002).

Business groups also objected to the absence of a length of service requirement for PFL eligibility and to the program's coverage of temporary workers (Koss 2003). Some opponents also expressed concern about the potential for abuse of the program by workers who would take advantage of the program even if they lacked a legitimate need for family leave. "It's so easy for someone to say, 'Aunt Mary needs me to go take care of her,' and the decision whether that person is eligible for paid leave or not is going to be made by the Employment Development Department," one employer complained (Girion and Garvey 2002).

Our 2010 survey of 253 California employers, however, suggests that these widely expressed fears have not materialized. After more than five years' experience with PFL, the vast majority of employers in our survey reported that it has had minimal impact on their business operations. Specifically, in our survey, employers were asked about the impact of the PFL program on their organization's profitability and productivity, as well as about the impact on employee turnover and morale. About nine out of ten respondents reported either a positive effect or no effect of the program on their establishments.

When asked, "What effect has it [PFL] had on this location's business productivity?" 88.5 percent of employers reported either a "positive effect" or "no noticeable effect." In response to the question, "What effect has it had on this location's business profitability / performance?" an even higher percentage, 91.0 percent, reported that PFL had either a "positive effect" or "no noticeable effect." (For nonprofits, which make up about one-fifth of the overall sample, the question was asked about "performance"; the rest were asked about "profitability.") Employers were asked about PFL's effects on employee turnover, the proportion of

employees who quit in a given period. In response, 92.8 percent of employers surveyed reported that PFL had a "positive effect" or "no noticeable effect." And with respect to employee morale, 98.6 percent said that the effect was either positive or not noticeable.

Contrary to the pre-enactment claims of business groups that the PFL program would place a particularly severe burden on small businesses, our survey found that, among the minority of employers that did report negative effects, the larger establishments—those with more than 100 employees—were actually *overrepresented*, as **Table 1** shows.

Table 1. Employer Assessments of PFL's Effects, by Number of Employees, 2010

"No Noticeable Effect or Positive Effect" On:	Less than 50 Employees	50–99 Employees	100+ Employees	All Employer Respondents
Productivity	88.8%	86.6%	71.2%	88.5%
Profitability/ performance	91.1%	91.2%	77.6%	91.0%
Turnover	92.2%	98.6%	96.6%	92.8%
Morale	98.9%	95.6%	91.5%	98.6%

N=175

Note: The number of employees shown refers to the stratum of firms from which the establishment was drawn and in some cases may not match current firm size due to the effects of the 2008-2009 recession.

Another concern business groups had raised when the legislation was being debated was that PFL would be subject to abuse, with workers filing claims that were not medically legitimate. However, asked if they were "aware of any instances in which employees that you are responsible for abused the state Paid Family Leave program," 91.2 percent of all employers surveyed replied "No." And among the 9 percent of employers who did report abuse, it was a relatively rare occurrence: 27.2 percent of all employer respondents who were aware of abuse reported they knew of only one instance, and nearly all (99.5 percent) knew of no more than five instances in which abuse of PFL had occurred.

Asked if the introduction of the PFL program had resulted in "any cost increases," 86.9 percent of employers responding indicated that it had not. Moreover, some employers (8.8 percent of those responding to this question) indicated that the PFL program had generated cost *savings* for their organizations, by reducing employee turnover and/or by reducing their own benefit costs when employees used the program instead of (or in combination with) employer-provided paid vacation, sick leave, or disability benefits. Indeed, for employers that do offer such benefits, the state PFL program often functions as an indirect subsidy to their payrolls. Although only 8.8 percent of employers reported cost savings, the real figure is probably higher: 60.0 percent of employers surveyed reported that they coordinated their own benefits for exempt employees with the PFL program, and nearly as many (58.4 percent) did so for non-exempt employees.

The minority of employers who reported cost increases (13.1 percent) in most cases incurred additional hiring and training expenses to cover the work of employees who were out on leave. However, the great majority of employers reported no such cost increases. They typically covered the work of employees on leave by assigning the work temporarily to other employees.

Labor law makes a distinction between "exempt" and "nonexempt" employees. The latter are typically paid on an hourly basis and must be given overtime pay for work beyond a certain limit in accordance with federal and state requirements. In contrast, the former are generally paid on a salary basis and are not covered by overtime regulations.[7] For covering the work of exempt workers on leave, temporary reassignment of work to other employees was the most common method, cited by nearly all (96.6 percent) employers surveyed. And nearly two-thirds (63.3 percent) of employers surveyed used this method most often in covering the work of non-exempt employees on leave. Most of the rest reported that the most common method was to hire temporary replacements to cover the work.

PAID FAMILY LEAVE AND INCOME INEQUALITY

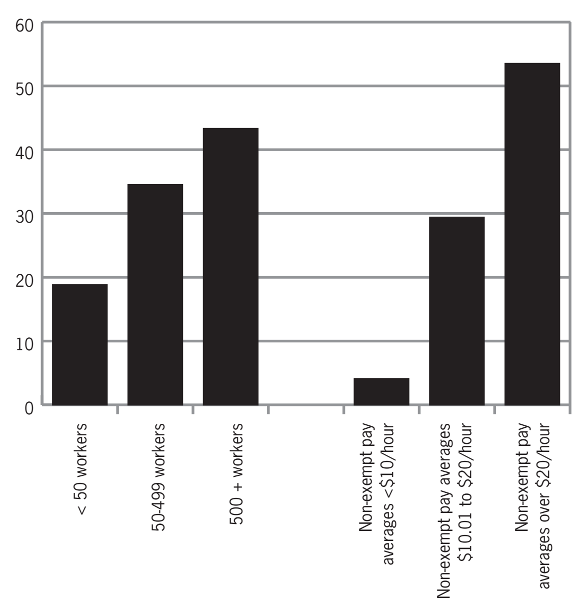
Employer-provided "family-friendly" policies that can be used to obtain wage replacement during parental and other family-related leaves are unevenly distributed among the labor force, as many previous researchers have pointed out (see for example, Heymann 2000; Williams and Boushey 2010). Women continue to have far greater family caregiving responsibilities than men do on average. But employers generally provide their male-dominated occupations with more extensive wage replacement for family-related absences or leaves from work than their female-dominated occupations receive.

Many employers are especially interested in retaining their most highly trained workers and are aware that providing income support during leaves from work increases retention. They therefore typically offer professional and managerial workers income support during family-related leaves—usually some combination of paid sick days, paid vacation, paid disability insurance (which covers many pregnancy-related leaves) and/or paid parental leave. In contrast, low-wage workers often have limited or no access to such benefits.

Our 2009-10 screening survey of California workers who experienced life events that qualified them for Paid Family Leave (PFL) provides further confirmation of the inequality in employer-provided benefits. Among respondents in the private and nonprofit sectors, access to paid sick leave and paid vacation was available to 80.4 percent of those in "exempt" jobs compared to 66.8 percent of those in non-exempt jobs. Men were more likely to have such access than women: the rates were 74.1 percent and 66.1 percent, respectively.

Even more striking is the contrast between respondents who had "high-quality jobs," defined here as jobs that pay more than $20 per hour and provide access to employer-provided health insurance benefits, and those in low-quality jobs that did not meet this standard. Nearly all (93.5 percent) respondents with high-quality jobs had access to employer-provided paid sick days and/or paid vacation. But only 62.1 percent of those with low-quality jobs had such access. Similarly, the data in our 2010 survey of California employers, summarized in **Figure 1**, show that large employers, those with a large proportion of exempt workers, and those with relatively highly paid non-exempt workers are more likely to provide paid sick days and paid vacation days to their non-exempt workers than smaller establishments and those with lower pay levels for non-exempts. (See also Milkman and Appelbaum 2004 for similar findings from an earlier survey.)

Figure 1. Percentage of Establishments That Offer Paid Sick Days and Paid Vacation Days to All Non-Exempt Employees, by Size and Average Non-Exempt Pay, 2010



N=253 for number of workers; N=190 for average non-exempt pay

In this regard, the most important feature of California's PFL program is the nearly universal scope of its coverage. Professionals and managers and others whose employers already provide them with paid time off can now draw on PFL as well; but for this group access to wage replacement historically has been as good or better than what the state program now offers. By contrast, low-wage workers with limited or no benefits stood to gain much more from the new state program.

In striking contrast to the FMLA (as noted in the introduction to this report), California's PFL program covers nearly all private-sector workers, as well as those employed by nonprofit organizations, regardless of the size of the organization for which they work. The only exception is workers who are self-employed (although they can opt into the system). Most part-time workers in the private and nonprofit sectors are covered as well, since to be eligible for PFL, a covered worker needs only to have earned $300 or more during any quarter in the "base period," which is five to seventeen months before filing a claim.

The promise of the California PFL program, then, is to provide access to paid leave to workers who have no other means of obtaining it, especially low-wage workers. Thus far, however, that promise remains largely unfulfilled, in large part because many Californians are unaware of the PFL program. Although poll after poll shows that most Americans, and most Californians, strongly support the concept of paid family leave, public awareness in California of the existing PFL program remains limited. Moreover, those Californians who need the program the most—low-wage workers, immigrants, and Latinos (groups that overlap significantly)—are the least likely to be aware of it.

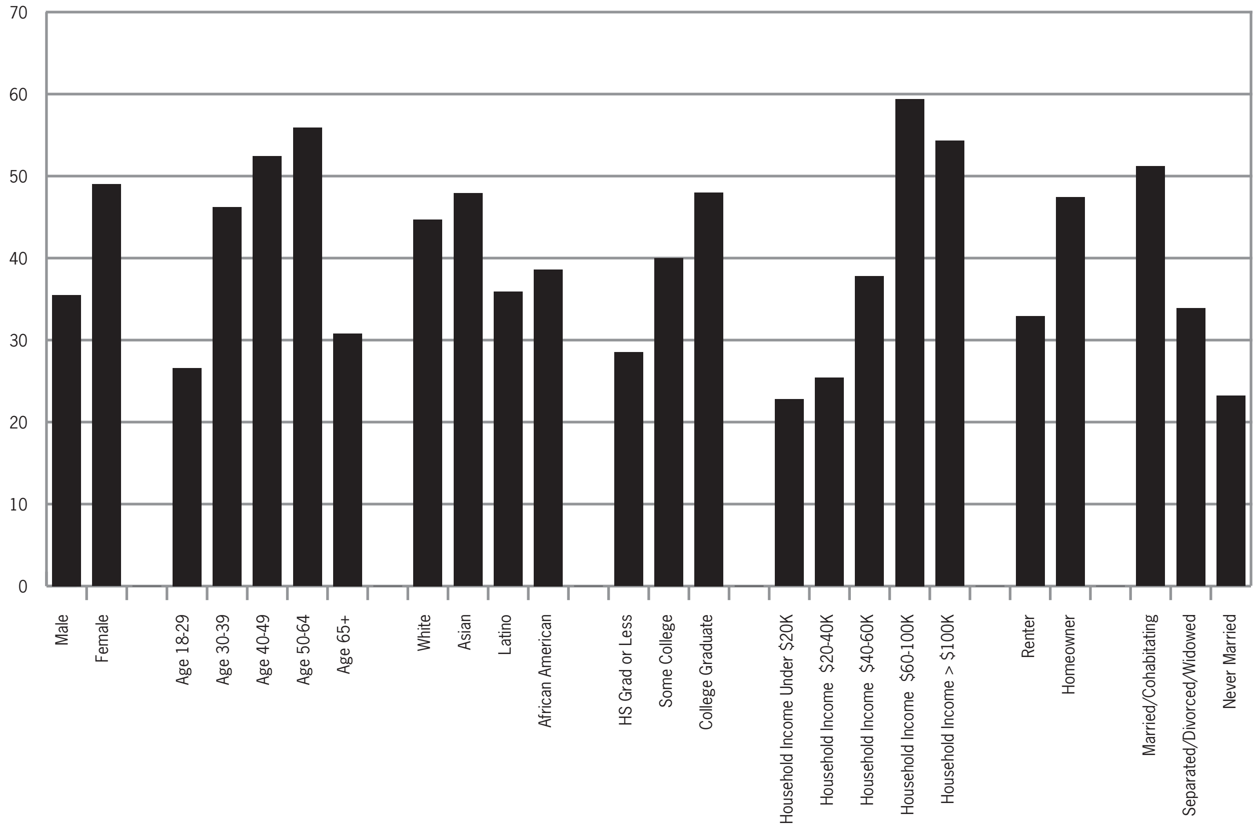
INEQUALITY AND AWARENESS OF PFL

The August 2011 Field Poll included a series of questions that we designed for the purpose of determining the extent of public awareness of PFL. The results are summarized in **Figure 2**. Respondents—all of them registered voters—were read a brief description of the California program and then asked, "Have you seen, read or heard anything about the Paid Family Leave program?" Among the full group of respondents, 42.7 percent indicated that they were aware of PFL.

However, as Figure 2 shows, these data reveal that awareness of PFL is least extensive among the demographic groups that need it the most. The one exception is gender: females—who are more likely than their male counterparts to assume the care responsibilities that trigger the need for family leave—are more aware of PFL than males.

For all the other demographic categories shown in Figure 2, the data suggest that those most in need of PFL are least likely to be aware of it. Thus respondents under thirty years old—the age group most likely to become new parents—were less aware of PFL than older workers. Latinos and African Americans were less aware of PFL than the other ethnic and racial groups shown. Respondents with no post-secondary education were also less aware of PFL than those who had attended or graduated from college. Perhaps most important, low-income respondents—those with annual household incomes under $40,000—were far less likely to be aware of PFL than those with higher incomes.

Figure 2. Awareness of PFL among Registered Voters in California, by Selected Demographic Characteristics, August 2011.



Source: Field Research Corporation Survey of California Registered Voters, August 2011

GENDER AND PAID FAMILY LEAVE

As many commentators have noted, a key obstacle to further progress toward gender equality in the workplace has been the persistence of an unequal division of labor between men and women in the home. Women still bear a disproportionate burden of caregiving work, not only in regard to children but also elders and other seriously ill family members. This tendency has a deleterious impact on their earnings and workplace opportunities.

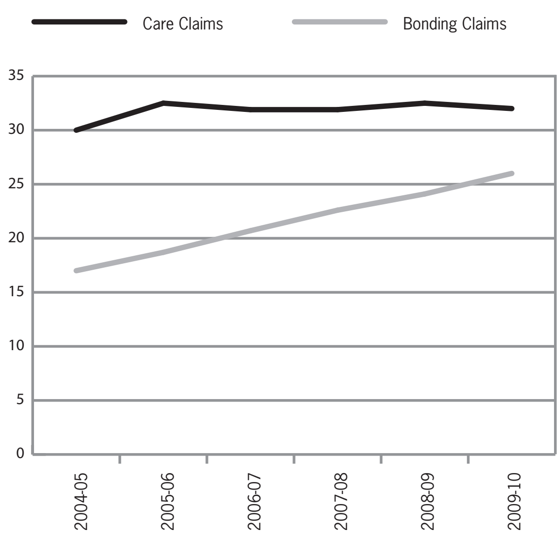
California's PFL benefits are equally available to men and women who become new parents or who have a seriously ill family member in need of care. And since eligibility is based on the past employment of individual workers, regardless of gender, both men and women who actively participate in parenting a new child can take advantage of the program, either sequentially or at the same time. Similarly both men and women can act as caregivers for a sick family member, so long as no more than three eligible family members are receiving PFL for providing care in any given twenty-four hour period.

This feature of the California program, along with the fact that it offers wage replacement during family leaves, seems to be an effective incentive for men's increased participation in caregiving. The incentive effect applies to fathers who are bonding with new or newly adopted children and to those caring for seriously ill family members. Increased male participation could be the result of the availability of

substantial wage replacement and/or the fact that the benefits are part of a state-sponsored program. The latter might make using the program more legitimate in the eyes of men and in the eyes of their employers.

Women use the PFL program more extensively than men do, which is not surprising given the fact that women still assume the bulk of family caregiving responsibilities. But there is growing evidence that men are using the program, especially for purposes of bonding with newborn or newly adopted children. As **Figure 3** shows, there has been steady growth in the proportion of all PFL bonding claims filed by men over the period since the program began in mid-2004.

Figure 3. Percentage of PFL Claims Filed by Men, by Type of Claim, 2004-2010.



Source: California Employment Development Department

The data in Figure 3 were collected by the state of California's Employment Development Department (EDD), which administers the PFL program. The proportion of bonding claims filed by men has gone up steadily and substantially over the life of the program. By contrast, the gender composition of care claims has been flat, except for a small increase during the second year of the program's existence, but male take-up of this part of the program is actually greater, at just under one-third of all "care claims." That proportion is higher than the male proportion of bonding claims, but the gap has narrowed over time.

Our survey found a gender gap similar to that in the EDD data, in that among respondents who were aware of the PFL program and employed in the private or nonprofit sectors (our best proxy for PFL eligibility), 25 percent of male respondents, but 49 percent of females, had made use of the program. Our survey found that women's family leaves were longer than those of men, those men who go on leave took substantial time off, with a median of three weeks for both bonding and caregiving leaves. That figure can be contrasted with a median of twelve weeks for women on bonding leaves and five weeks for women on caregiving leaves.[8]

The employers we surveyed in early 2010 also reported an increase in male employees going on parental leave. Asked if "the number of men who took paid parental leave this year to care for a new child is more, less, or about the same as it was five years ago," 31 percent of the employers said "more," while 5 percent said "less." (The others reported no change.) By contrast, these employers saw almost no change in the number of women taking parental leave over this period (16 percent indicated that more women were taking paid parental leave than five years earlier, 15 percent said less, and the others reported no change). However, 36 percent of the employers we surveyed reported that women were taking longer leaves than they had five years earlier, with only 4 percent reporting shorter leaves (the rest reported no change).

Many employers indicated that men, like women, were taking longer leaves than was the case before PFL was available, with 32 percent of employers reporting that men were taking longer parental leaves than before, compared to 4 percent reporting shorter leaves (the others reported no change). The average parental leave employer respondents reported for men was four weeks (compared to ten weeks for women).

THE IMPACT OF PAID FAMILY LEAVE ON WORKERS AND THEIR FAMILIES

Respondents to our 2009-10 screening survey who utilized the California Paid Family Leave (PFL) program when they took a leave from work to bond with a new child or to care for a seriously ill family member reported better economic, social, and health-related outcomes than those who did not use the program. PFL users had higher levels of wage replacement, were able to take longer leaves, and were more satisfied with the length of their leaves. In addition, using PFL enhanced workers' ability to care for their children or ill family members and, for those in low-quality jobs, increased the likelihood of returning to work with the same employer.

As documented in the previous section, workers in low-quality jobs had the most to gain from the introduction of PFL, but were less likely to be aware of its existence, than workers in high-quality jobs (defined as jobs paying over $20 per hour with access to employer-provided health insurance). However, for the minority of workers in low-quality jobs who were not only aware of PFL but who actually used it during their family leaves, outcomes were greatly improved relative to those of workers in low-quality jobs who did not use PFL.

WAGE REPLACEMENT DURING FAMILY LEAVE

Among all workers in our sample who had taken a family leave during the four years previous to the survey, 39 percent received no wage replacement from any source; another 10 percent received less than half of their usual pay. Only a fifth of all workers who took a family leave received all of their usual pay. Use of PFL made a substantial difference in the level of wage replacement. Nearly half (47.4 percent) of all workers who did not use the PFL program during their leave, as Table 2 shows, received no wage replacement at all. And the vast majority (83.8 percent) of those who used PFL while on leave received at least half their usual weekly pay, more than double the percentage of those who did not use PFL (42.4 percent).[9]

All workers who used the program benefited from PFL in regard to wage replacement, whether they were in high-quality or low-quality jobs. Among workers in our sample with high-quality jobs, 93.6 percent of those who used PFL drew at least half their usual pay while on family leave, compared to only 71.7 percent of those in high-quality jobs who did not use the program.

However, many workers in high-quality jobs can draw on accumulated paid sick days, paid vacation or other paid leave benefits for wage replacement when they go on leave. Indeed, in our sample, nearly half (46.8 percent) of those in high-quality jobs who did not use PFL nevertheless received full pay from such sources. These employees, with access to generous employer-provided benefits, may not need PFL. But for all other respondents employed in high-quality jobs (i.e., those who did not receive full pay), PFL sharply boosted the level of wage replacement, as **Table 2** shows.

Table 2. Wage Replacement During Family Leave, by PFL Use and Job Quality, 2009-10

Proportion of Usual Pay Received During Leave	All Workers			High-Quality Jobs		Low-Quality Jobs	
	All	Used PFL	Did Not Use PFL	Used PFL	Did Not Use PFL	Used PFL	Did Not Use PFL
No Pay	38.8	0.0	47.4	0.0	16.7	0.0	59.2
Less Than Half	10.3	11.3	10.1	6.4	11.6	16.2	9.6
About Half	15.3	38.9	10.1	51.8	9.0	25.9	10.6
More Than Half	15.3	41.8	9.4	35.4	15.9	48.2	6.9
Full Pay	20.2	8.1	22.9	6.4	46.8	9.7	13.7
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

N=204

That said, it was workers in low-quality jobs who gained the most economically from using PFL. Among workers in this group that did not use PFL, 59.2 percent received no wage replacement at all, and another 9.6 percent received less than half their usual pay. In sharp contrast, among those in low-quality jobs who used PFL, only 16.2 percent received less than half their income. All the rest (83.8 percent) received at least half of their usual income while on leave, compared with just 31.2 percent of those who did not use PFL. The PFL program, then, is a critically important source of income support for low-wage workers who must miss work to attend to their families' needs.

LENGTH OF LEAVE

While PFL made a substantial difference in access to wage replacement during leave, especially for those in low-quality jobs, its effects on length of leave were mixed. As **Table 3** shows, the median length of baby bonding leaves taken by all new mothers in our sample was twelve weeks—and for mothers in low-quality jobs the median length was the same whether they used PFL or not. Mothers in high-quality jobs took longer bonding leaves, however, with a median length of eighteen weeks for those who used PFL.

For fathers, the median length of parental leave was also longer for those who used PFL than for those who did not, especially for fathers in low-quality jobs. Men in low-quality jobs took longer leaves than those in high-quality jobs, for both baby bonding and for leaves to care for an ill family member.

Among all respondents, the median length of leave to care for an ill family member was four weeks, with women taking more time off than men. The longest leaves were taken by PFL users in low-quality jobs—a median of six weeks for men and eleven weeks for women. The explanation for this pattern is unclear, and the sample size is too small to be reliable for some subgroups, but one possibility is that better-paid workers can more easily arrange to pay someone else to care for an ill family member, enabling them to return to work sooner than those who cannot afford to pay an outside caregiver.

Table 3. Median Length of Family Leave (in Weeks), by Gender, Leave Type, and Job Quality, 2009-10

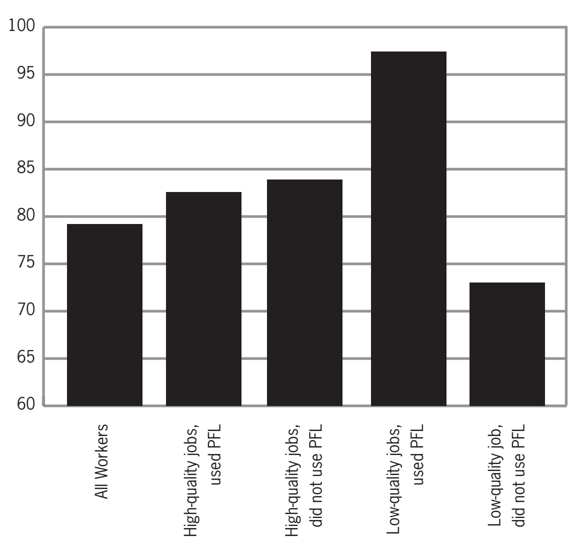
Type of Leave	All Respondents	High-Quality Jobs		Low-Quality Jobs	
		Male	Female	Male	Female
Baby Bonding Leaves	8	2.5	14.5	3	12
Ill Family Member Caring Leaves	4	3	4	6	8
Used Paid Family Leave					
Baby Bonding Leaves	12.5	4	18	8	12
Ill Family Member Caring Leaves	7	3	5	6	11
Did Not Use Paid Family Leave					
Baby Bonding Leaves	6.5	2	12	3	12
Ill Family Member Caring Leaves	4	3	3.5	4.5	4

N=102 for bonding leaves, N= 80 for caring leaves

SATISFACTION WITH FAMILY LEAVES

Most respondents (79.2 percent) reported that they were "very satisfied" or "somewhat satisfied" with the length of their family leaves. Among workers in high-quality jobs, many of whom had access to income from employer benefits while on leave, satisfaction with the length of leave was the same regardless of whether PFL was used. As **Figure 4** shows, more than four-fifths of these workers reported that they were very satisfied or somewhat satisfied with the length of their leave. For workers in low-quality jobs, however, the use of PFL made a striking difference in satisfaction with the length of leave. Among workers in these jobs, nearly all (97.4 percent) of those who used PFL were very satisfied or somewhat satisfied with the length of their leave, compared with only 73.0 percent of those who did not use PFL.

Figure 4. Percentage of Workers Who Were "Very Satisfied" or "Somewhat Satisfied" with Length of Family Leave, by Job Quality and Use of PFL, 2009



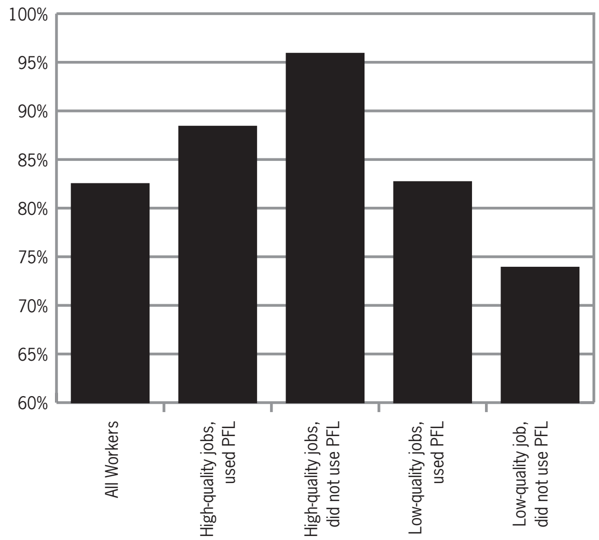
N=198

TURNOVER AND RETENTION

Among our respondents, more than 95 percent of those who took a family leave returned to work at the end of the leave period, and more than four-fifths returned to the same employer they had worked for prior to the leave. **Figure 5** shows that the share of workers returning to the same employer was highest among respondents in high-quality jobs who did not use PFL. This finding probably reflects the more generous employer-provided pay these workers received during periods of leave. As noted above, nearly half the workers in high-quality jobs who did not use PFL received full pay from their employer.

Among workers in low-quality jobs, however, use of the PFL program is associated with a far greater likelihood of returning to the same employer after a family leave. For this group the retention rate was 82.7 percent for those who used the PFL program compared with 73.9 percent for those who did not. This result suggests that California's PFL program provides an important benefit for employers. The benefit is greatest for smaller employers that may be unable to afford high levels of wage replacement for workers but that wish to retain workers on family leave.

Figure 5. Percentage of Workers Who Returned to Former Employer after a Family Leave, by Job Quality and Use of PFL, 2009



N=165

PFL'S EFFECTS ON CAREGIVERS AND ON THOSE RECEIVING CARE

The screening survey data also offer insight into the impact of family leaves on outcomes for caregivers and care recipients. In the case of bonding leaves to care for a new baby, relevant outcomes include the ability of parents to care for their newborns, mothers' ability to initiate and to sustain breastfeeding, and parents' ability to make child care arrangements. In the case of caring leaves to attend to the needs of a seriously ill family member, outcomes include the ability of leave-takers to care for the ill family member, as well as the effects on the ill family member's health. **Table 4** summarizes our key findings regarding these outcomes.

About four-fifths (81.9 percent) of respondents who took bonding leaves reported that the leave had a positive effect on their ability to care for the child. The use of PFL made an especially striking difference for respondents in low-quality jobs, where 90.8 percent of workers who used PFL reported that the leave positively affected their ability to care for the new child, compared with 71.1 percent of those who did not use PFL.

Table 4. Family Leave Effects on Caregiving Ability and Health of Care Recipients, by Job Quality and Use of PFL, 2009-10

Effects of Leave	All Respondents	High-Quality Jobs		Low-Quality Jobs	
		Used PFL	Did Not Use PFL	Used PFL	Did Not Use PFL
Percent Who State that Leave Had Positive Effect on Ability to Care for New Child (N = 139)	81.9	100.0	90.2	90.8	71.1
Percent Who State that Leave Had Positive Effect on Ability to Care for New Child (N = 139)	85.2	75.7	90.9	92.5	83.3
Median Weeks of Breastfeeding (N = 72)	6	11	5	9	5
Percent Who State that Leave Had Positive Effect on Ability to Arrange Child Care (N = 114)	58.0	56.7	68.8	72.4	49.1
Percent Who State that Leave Had Positive Effect on Ability to Care for Ill Family Member (N = 79)	76.6	100.0	96.3	69.2	71.0
Percent Who State that Leave Had Positive Effect on Ill Family Member's Health (N = 58)	82.0	100.0	100.0	69.2	74.8

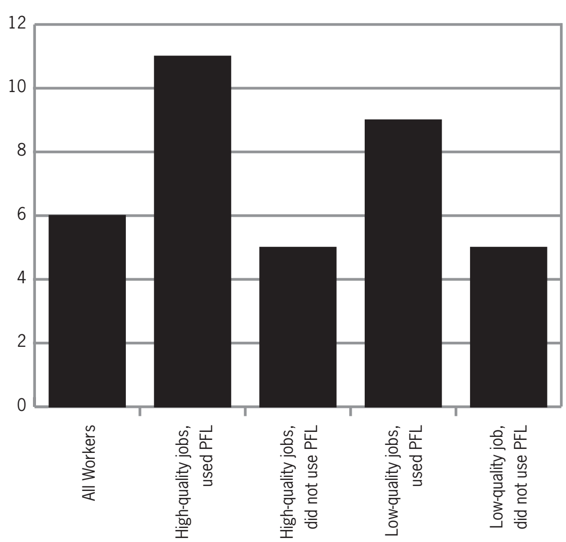
Most new mothers in our sample (85.2 percent) reported that they had breastfed their new baby. In this regard, use of PFL made an important difference for new mothers in low-quality jobs: 92.5 percent of

those that used PFL initiated breastfeeding, compared with 83.3 percent of those that did not use PFL. The use of PFL affected the duration of breastfeeding, roughly doubling the median weeks for which infants were breastfed: from five to eleven weeks for mothers in high-quality jobs and from five to nine weeks for mothers in low-quality jobs, as **Figure 6** and Table 4 show.

Previous research suggests that longer leaves for new mothers are associated with longer duration of breastfeeding of the infant (Guendelman et al. 2009). Our results provide further confirmation. For new mothers who took bonding leaves of fifteen weeks or more and used PFL, the median duration of breastfeeding was 13 weeks.

Leaves were also helpful in enabling parents of a new child to make child care arrangements. Among all parents, 58.0 percent reported that PFL had a positive effect on their ability to arrange child care. For parents in low-quality jobs, PFL made a substantial difference, with 72.4 percent of PFL users reporting a positive effect, compared to 49.1 percent who did not use PFL.

Figure 6. Median Weeks of Breastfeeding for New Mothers, by Job Quality and Use of Paid Family Leave, 2009



CONCLUSION

Since July 1, 2004, when California became the first state to offer Paid Family Leave (PFL), the program has substantially benefited the workers who utilize it, especially workers in low-quality jobs, and has had minimal impact on businesses. Despite fears expressed by opponents of the program that PFL would create a heavy burden on the state's employers, our survey data suggest that they seem to have had little difficulty adjusting to it. Five and a half years after PFL began operations, the vast majority of employers we surveyed reported positive effects or no effect at all on their productivity, profitability, or performance. Only a tiny minority reported any negative effects.

Predictions that small businesses would find it especially difficult to adapt to PFL were not borne out. On the contrary, among the few employers that did report negative effects, large businesses predominated. Cases of PFL abuse were rare. The vast majority of employers reported that they knew of no cases in which their employees had abused the program.

Indeed, for many employers, PFL generated cost savings, either due to reduced turnover or because they coordinated their own wage replacement benefits (such as paid sick days or vacation) with the state PFL program. A few employers did report higher costs due to the need to hire temporary replacements for employees who took family leave, or to pay overtime pay to their co-workers. But most employers reported that they covered the work of those out on leave by reassigning it to other employees, at little or no cost.

There is some evidence that the introduction of PFL has had an equalizing effect on the gender division of parenting. Men in California have increased their use of PFL for bonding leaves over the past five years. In addition, the employers we surveyed report that new fathers have been taking more and longer leaves than

was the case before the program existed. By increasing male participation in parenting in this way, PFL also may help reduce gender inequality in the labor market.

Use of PFL is also associated with better economic, social, and health outcomes for workers and their families. For example, our data show that PFL use doubled the median duration of breastfeeding for new mothers. In addition, wage replacement levels were higher for workers who used PFL than for those who did not, especially among workers in low-quality jobs. Workers in low-quality jobs who used PFL were more likely than those who did not to return to the same employer after a family leave. Such workers were more satisfied with the length of their leave, were better able to care for newborns, and were better able to make child care arrangements.

However, despite all these positive achievements, challenges remain. The biggest single problem is the limited public awareness of the program. When PFL was introduced in California, many supporters hoped that it would reduce the inequality in access to wage replacement during family leave (which until 2004 was limited to employer-provided paid sick leave, vacation, disability, and the like). For those workers who are aware of the program and its provisions, this hope has been realized to a considerable degree.

Unfortunately, however, not only is general public awareness of PFL limited, but those who stand to benefit most from it are the least likely to be aware of the program. Low-income workers, African Americans and Latinos had especially low awareness of the program. These groups typically have limited access to other sources of wage replacement during family leaves.

ENDNOTES

1 A longer version of this chapter was jointly published in 2011 as a policy report by the Center for Economic and Policy Research, the Rutgers University Center for Women and Work, the UCLA Institute for Research on Labor and Employment, and CUNY's Murphy Institute for Worker Education and Labor Studies.

2 FMLA covers all public-sector workers, and private-sector workers who work for organizations with fifty or more employees on the payroll at or within seventy-five miles of the worksite. In addition, to be eligible for FMLA leave, one must have been with the same employer for at least 12 months, and have worked 1,250 hours or more in the year preceding the leave.

3 The State of Washington passed a paid family leave law in 2007, but no funding has been provided for it to date. New Jersey passed a law establishing Family Leave Insurance in 2009 and it is now in operation. The other 47 states lack any such program, although laws are under consideration in several of them.

4 For biological mothers, this new benefit supplements the pregnancy disability benefits previously available under SDI. Although it does not increase the amount of job-protected leave available to women who have given birth, it does provide six *additional* weeks of partial wage replacement.

5 SDI benefits for pregnancy typically cover up to four weeks before delivery and an additional six to eight weeks afterward at the doctor's discretion.

6 See Milkman and Appelbaum 2004. The 2011 survey is not directly comparable to the 2003 survey analyzed in that article, since the sample in the latter was drawn from the state's entire adult population, and not restricted to registered voters.

7 Exempt workers usually are in managerial, supervisory, or professional occupations and are paid above a specified amount.

8 Leave lengths referred to here and throughout this section were measured independently of whether respondents used PFL.

9 This figure is not 100 percent because some respondents took leaves longer than the 6 weeks for which they could receive wage replacement through the PFL program.

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5

GREEN JOBS AND THE LOS ANGELES REGION

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EXECUTIVE SUMMARY

"The lesson of history is very clear: Every time we challenge American industries with higher standards, they meet them earlier, for less money and invent new products to export along the way."

—George P. Shultz, former U.S. Secretary of State

Green jobs account for about 178,500 of roughly 4.5 million employed in the LA region in 2008, or about 3.9 percent of total employment, and perhaps 4.5% of private sector employment. However, the industry has grown, and is projected to continue to grow, substantially faster than the overall economy, so by the late 2030s the absolute number will increase by a factor of at least 60 to 100%. Green occupations in the late 2030s will represent between 4% and 8% of the roughly four million employed in the region (based on the California Department of Finance's population projections).

Greenhouse gases and their effects on climate are widely viewed as the most significant market failure in the world today. A variety of public policies are being implemented, or under consideration, to slow or reverse the emission of carbon dioxide and other heat-trapping gases into the atmosphere.

The renewables industry's effects on personal income, and therefore prosperity, will be proportionally greater because anecdotal evidence suggests that these occupations have substantial skill requirements allowing workers to command wages twice those of the average job. (Many others require relatively little education past high school, but still pay more than other similarly-prepared occupations). To put these numbers in perspective, the increase in total jobs stimulated by the growth of the green industry is far larger than California's entire mining industry, and roughly comparable to the utility or aerospace industries in their prerecession peaks.

Green jobs already employ far more than ten times as many workers in the LA region as does petroleum and coal products production (4,400 in 2009, according to the Employment Development Department). These projected gains will roughly equal the jobs lost statewide during the Great Recession in the electronics manufacturing (high tech) and "information" (software and publishing) industries.

Net jobs in the Los Angeles region due to "green" industries

	2010 Actual	2020f		2040f	
		Low	High	Low	High
Total jobs	178,550*	207,200	240,000	279,100	433,400
Increase vs. 2010	NA	28,700	61,400	100,500	254,800

*Note: Includes jobs in Ventura County.

Estimates presented in this chapter are broadly consistent with those of the California Air Resources Board's June 2009 statewide report, as reviewed by a panel of eminent independent economists in April 2010. Assembly Bill (AB) 32 was passed by a bipartisan majority in the California Legislature and signed into law by Governor Schwarzenegger in 2006, and it is currently in its implementation phase. (AB 32 is now part of most estimates' "business as usual" baseline scenarios.)[1] The results of a statewide census of green jobs, conducted in 2010 by the state's Employment Development Department, found 178,500 such jobs in the Southern California region (which coincides with the region examined in this study with the addition of Ventura County). So for this sector, LA appears to be among the most innovative regions of the nation's most innovative state.

Faster improvements would mean more rapid convergence of renewables' production costs with traditional fossil fuels (natural gas, coal, and oil). Because renewables are generally young technologies, they have much more room to improve than do fossil fuel-based electricity, which is a mature technology. In time, however, the cost per kilowatt-hour from renewables will fall to, and later below, the incumbent technology, constituting a true "disruption".

When such "grid parity" (equal or lower cost) will be achieved is a matter of speculation, but rapid advances in many renewables and storage technologies suggest it is not an idle dream. Lower energy costs will have two major macroeconomic effects. First, lower prices will lead to increased energy consumption (modulating the environmental benefits). Second, the savings achieved will be spent or invested in other sectors, boosting output and employment there. This chapter relies on the U.S. Department of Energy's Energy Information Administration (discussed in detail below) for its expectations of the rate of technological change.

Spurred by a favorable climate of growing demand, falling component prices, and supportive policy, the green jobs industry has seen rapid growth in the past decade. That growth will moderate in the future, but will still exceed most other industries. In sum, renewables power generation and related fields (including energy conversion occupations) are well into the "takeoff" stage, not only in the U.S., but several other countries also.

THE PREVAILING TRADEOFF IN ENVIRONMENTAL AND ENERGY POLICY

Analysts and scholars of a free market bent, including the author, generally believe that limited government intervention leads to superior economic performance. However, even free marketers acknowledge there

are many exceptions to this rule. For example, unless business owners are protected from property crimes by security forces which provide lawful protection, expensive investments will be vulnerable to criminal activity.

Only lawfully constituted authority (i.e., police) can provide such protection on a large scale. Without it, there would be little incentive for entrepreneurs to invest and create employment opportunities. The general economic term for this situation is "market failure": when some market participants cannot capture all the benefits and costs of their actions. In this example, criminals impose an external cost (known as a "negative externality") on the victims of their crimes, and on those left unemployed because crime discourages necessary investment.

Today a prime example of market failure and negative externality is in the area of environmental protection. A factory that belches pollutants into the air imposes costs on all those who breathe the air nearby, costs that are not included in the factory's direct costs. It takes intervening action by a legally constituted authority—i.e., by government—to make the offender "internalize" (bear all the costs of) this externality.

Greenhouse gases (GHG) and their effects on climate are widely viewed as the most significant market failure in the world today. A variety of public policies are being implemented, or under consideration, to slow or reverse the emission of carbon dioxide and other heat-trapping gases into the atmosphere. California has implemented a number of anti-GHG policies, as have a number of local governments in the LA basin. These policies can help create new jobs in California's green industries.

DEFINING GREEN JOBS

The definition of "green jobs" is still fluid, as is common in a new sector. We adopt the definition used by the state Employment Development Department's (EDD's) Labor Market Information Division (LMID) in its recent survey of statewide green employment:

> *LMID defined a green job as one whose activities: 1)* **generate** *and store renewable energy; 2) collect and/ or process* **recyclable** *materials; 3) manufacture, distribute, construct, install, and maintain* **energy efficient** *products; 4) foster* **education**, *environmental consulting, regulatory compliance, and awareness; or 5) manufacture* **natural** *and sustainable products. For survey purposes, a green job was summarized by the mnemonic* **GREEN**.
>
> —*California's Green Economy, Summary of Survey Results*, EDD, October 2010

The new employment opportunities in green industries and occupations, known as "green jobs" span manufacturing (e.g., renewable energy components), and services (e.g., system installers and consultants). They also include technicians that maintain electricity production, transmission, and distribution facilities; renewable energy system installers and consultants; and technicians who retrofit buildings to reduce their energy consumption.[2]

LONG TERM VS. SHORT TERM

This debate, like so many policy debates, is ultimately about the tradeoff between short term costs and long term benefits. In economics, the most common approach to reconciling this tradeoff is to recognize

the time value of money (or any other cost or benefit); this is done by "discounting" future costs and benefits to make them comparable to present ones. A brief summary of "present value" discounting is contained in the methodological appendix.

At its core, the policy challenge is that because traditional industries pay little price for the GHG-related externalities they impose on the rest of the economy, their true costs (including those externalities due to market failure) are actually higher than their accounting costs. This gives fossil fuels a powerful competitive advantage, which has retarded the growth in alternatives such as renewable electricity generation or transportation. Most policy alternatives impose an implicit or explicit price on the production of the GHGs that are a byproduct of many energy-consuming industries. A side benefit of such policies is that they aspire to "level the playing field" for renewable energy, which is comprised of less mature technologies that have not achieved the same level of efficiency as fossil fuels.

CONSERVATIVE METHODOLOGY

The green jobs forecast estimates are deliberately quite conservative, primarily because they assume relatively modest increases in efficiency from renewable electricity production technologies. Faster improvements would mean more rapid convergence of renewables' production costs with traditional fossil fuels (natural gas, coal, and oil). Because renewables are generally young technologies, they have much more room to improve than do fossil fuel-based electricity, which is a relatively mature technology. In time, however, the cost per kilowatt-hour from renewables will probably fall to, and later below, the incumbent technology.

When "grid parity" will be achieved is a matter of speculation, but rapid advances in many renewables and storage technologies suggest it is not an idle dream. Lower energy costs will have two major macroeconomic effects. First, lower prices will lead to increased energy consumption (modulating the environmental benefits). Second, the savings achieved will be spent or invested in other sectors, boosting output and employment there. This chapter relies on the U.S. Department of Energy's Energy Information Administration (discussed in detail below) for its expectations of the rate of technological change.

ECONOMIC IMPACT

The economic effects of the green jobs industry may go beyond the sheer number of jobs, if those jobs' skill levels command higher earning power. The addition, of, say, 100 jobs that pay $80,000 per year can be expected to have roughly four times the total economic impact (as a first approximation) of 100 $20,000 per year jobs. Therefore, a full representation of the economic role of such jobs would compute not only total regional net employment changes, but also net changes, to other measures of economic well-being, such as output (GDP) or to personal income. If green jobs have higher skill requirements that can command higher wages than the average job, as most research has suggested, these broader impacts can be expected to be disproportionately greater than employment changes alone. However, due to an absence of detailed wage information about these occupations (because many are fairly new and have not yet been extensively documented), our comments on the effects on personal income will be quite brief.

We have also not explicitly included the indirect effects of job growth or loss because many of the source studies we surveyed failed to indicate whether the job changes they estimated were only direct jobs, or total jobs (direct and indirect). Including indirect effects through

multipliers would have roughly doubled our direct jobs estimates (both gross jobs added and gross jobs lost).

CHAPTER OUTLINE

In the remainder of this chapter, the next three sections outline America's energy future under the most comprehensive extant forecast of the nation's overall energy portfolio. The next section briefly outlines trends in the renewable power industry worldwide, to put developments in the U.S. and in LA in context. Next, we summarize the important role of the Los Angeles region in the green sector. We then describe the employment benefits of the present environmental policy regime, often referred to as the "business as usual" (BAU) scenario. Our focus is on direct employment in "green" industries and occupations.

Subsequent sections include indirect effects on suppliers and customers of affected industries. These indirect effects allow us to recompute net *total* (economy-wide) employment changes (net effects). We examine the perturbations to these calculations that can be caused by more or less restrictive policy regimes and finally we summarize our findings in the conclusions. Several appendices summarize source material and methodological issues that affect this chapter's estimates and those of other studies.

AMERICA'S ENERGY FUTURE

Advocates of policy changes to curb GHG emissions or lessen America's dependence on foreign fuel sources generally focus in the incremental changes that can occur if their proposals are adopted. But the American economy and extent of its level of energy consumption are immense. Rarely are such recommendations placed in a broader economic context. For example, even a reduction in oil consumption of 1 million barrels per day, while considerable, would represent less than 5% of total national oil use (most of which goes for transportation).

Among the most comprehensive and eclectic long term forecasts of American energy usage is the **Annual Energy Outlook** (hereafter, AEO) produced by the U.S. Department of Energy's Energy Information Administration (EIA). AEO starts with three alternative economic forecasts from IHS Global Insight, the world's largest economic forecasting firm. Because in general, expanded economic activity requires expanded energy consumption, AEO converts one into the other via two translating steps: (a) it adjusts for the long term trend of declining **energy intensity** (i.e., reduced energy use per dollar of GDP); and (b) it makes a similar adjustment to reflect declining **emissions intensity** (i.e., fewer tons of GHG emitted per unit of energy consumed).

Energy intensity per dollar of GDP has declined by 70% since 1973, from 17,400 BTUs per dollar of inflation adjusted GDP to 5,100 BTUs in 2009. California's energy intensity has fallen slightly faster, so that total energy use in the state has been essentially flat for forty years despite a doubling of population and an even larger expansion of the state economy. The result is a 20% decline in per capita energy consumption over the four decades since 1970.

Going forward, AEO predicts that energy consumption will grow by only 14.5% over the next 25 years, even though the economy is expected to grow by 92%. Three fourths (76%) of that disparity will stem from changes in the structure of the economy (the continuing growth in the service sector, which uses less energy than manufacturing), and one fourth (24%) from improvements in energy efficiency.

This chapter uses the AEO as one point of departure for four basic reasons. First, it is comprehensive,

covering every fuel type and every consuming sector, so it puts demand and supply of renewables in proper portfolio context. Second, AEO recognizes that energy consumption and emissions need not rise quite proportionally to economic activity. (We extend this logic even more strongly to energy employment.)

Third, it is long term—25 years—allowing ample time for the effects of policy, technology, and structural changes in the economy to unfold. Fourth, it recognizes uncertainty about the rate of technological change. Finally, while AEO's main "reference case" assumes no further changes in state or federal policy beyond those already in place at the time the analysis was prepared, AEO also displays excursions reflected more or less aggressive energy conservation and anti-GHG policy regimes. Our approach can provide a reasonable first approximation of the energy drivers resulting from expended or reduced policies.

RECENT TRENDS IN THE GLOBAL RENEWABLES INDUSTRY

The **Renewables 2010 Global Status Report** (hereafter, "REN 21") is an annual summary of the state of the renewables industry with a distinctly global perspective. As in many promising new industries, renewable power generation has seen very rapid expansion. Unlike most industries, where rapid expansion tapers off as supply exceeds demand, REN 21 shows average annual growth rates in capacity by energy segment <u>accelerating</u> in 2009 vs. 2004 to 2008. **Table 1** illustrates this for selected green power segments.

Table 1 Accelerating Growth in Global Renewables Capacity, 2004 to 2009

Generating Segment	Annual Growth Rate of Capacity	
	2004-2008	2009
Distributed solar	9.9%	53%
Utility-scale solar	15.1%	44%
Wind	4.9%	32%
Ethanol	3.7%	10%
Solar thermal power	2.3%	41%

Source: Author's calculations based on REN 21

This accelerating trend is even more evident in an illustrative renewables segment: wind power. According to REN 21, the doubling time (the period necessary for world wind capacity to double) was four years in the late 1990s, three years in the early 2000s, and two years between 2006 and 2008. In the U.S. added wind capacity in 2009 was equal to 40% of all capacity extant at the beginning of the year, while China more than doubled its wind capacity that year.

The story with photovoltaic solar power is similar: Worldwide installed capacity took six years to double in the late 1990s, two and a half years between 2001 and 2003, two and a half between 2003 and 2006, one and a half years between 2006 and 2007. Despite the recession, between 2007 and 2009 capacity grew by another 50%.

Since 2006, when California's greenhouse gas law—AB 32—was enacted, worldwide renewable electricity generation investment across all technologies has increased two-and-a-half times, from $60 billion to $150 billion dollars per year, with the largest concentrations of investment in solar photovoltaic capacity (from 8 gigawatts in 2006 to 24 in 2009) and wind power capacity (from 70 gigawatts in 2006 to 160 in 2009). While California is hardly the only jurisdiction encouraging increased generation from renewable sources, its market power is evident in the above results. AB 32 was passed

by a bipartisan majority in the California Legislature and signed into law by Governor Schwarzenegger in 2006. AB 32 is currently in its implementation phase.

LA'S ROLE IN THE GREEN REVOLUTION

According to EDD's October 2010 report **California's Green Economy: Summary of Survey Results**, Southern California's share of green jobs is 178,500. Southern California is defined as the counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. According to EDD, energy efficient product manufacturing (27%), recycling existing materials (27%), and natural and sustainable product manufacturing (24%) comprise the largest share of green jobs. Combined, all three categories represent 78% of total green jobs.

Not surprisingly given the region's population and economic size (nearly half the entire state in each instance), LA is important in this sector as it is in many others. The same climate factor that causes high electricity consumption in the summer—high temperatures and bright sunshine, 276 days per year on average—also provides an opportunity for solar-generated electricity to meet that demand—either from photovoltaic arrays, or from solar-heated water to drive turbines. Some fast-growing "green" companies that are headquartered or have major operations in the LA region include:

- Intertek tests photovoltaic arrays, through its facility in Lake Forest, whose volume has doubled in the past year despite a poor economic climate.
- Capstone Turbine of Chatsworth, which manufactures microturbines for distributed generation, has grown at 40% per year for the past two years.
- At least four major solar projects have recently been permitted for construction at various sites in the Inland Empire (San Bernardino or Riverside counties), representing hundreds of megawatt-hours of electricity production.
- Sapphire Energy is one of the world's top five bio fuels suppliers, with operations in Orange County.

Companies in established sectors of the economy are making investments in clean technologies. Recent examples from the LA region include:

- In April, Toyota's sales and marketing campus in Torrance, CA announced it will soon install a one megawatt fuel cell generator that will provide peak electrical power and heat for the 125-acre campus and its 5,000 employees.
- In April, home furnishing giant IKEA plugged in its 290 kilowatt solar system at the company's 35,000-square-foot Burbank store. This is the fourth national solar installation for IKEA.

For this chapter, we collected every available recent forecast of green employment at the national, state, and local levels. (AEO does not forecast employment). All were published between 2008 and 2010. As noted earlier, not all forecasts estimated both job gains in green occupations/industries and job losses in incumbent energy-intensive industries. We adjusted each forecast based on factors (declining energy intensity, rising labor productivity) described in detail in the methodological appendix.

In a new sector such as "green" industries, high rates of growth are possible—at least for a short time—because the expansion is from such a small base. Growth rates of 3.1% to 6.9%, or a bit more than three times the expected long-term growth in the national economy (similar to the relative rate of growth in green jobs nationally since 1995), are reasonable for a new sector.

The tables displayed in the next few sections and in **Appendix A** summarize the studies consulted.

THE PROMISE OF GREEN JOBS

Tables 2 through **4** display employment gain forecasts for each of the studies consulted.

We briefly comment on a few of the studies cited below.

- A study by Next 10 noted, correctly, that many green jobs require higher skill levels than alternatives, and will offer "opportunities for career progression", even for those in jobs requiring only two years of education. For example, Solar City, a photovoltaic installation company, pays its installers $15 to 30 per hour.

- Most of the studies surveyed in this chapter were "top down", reflecting macroeconomic appraisals of this emerging sector. At least two were at least partially "bottom up". EDD's survey of green employment found that statewide green jobs account for 3.4% of California's total employment. The Next 10 report tabulated green jobs at the industry-specific level.

The 178,500 figure is Southern California's share of green jobs according to the 2010 EDD **California's Green Economy** report. Although the 178,500 jobs figure is high in comparison to the other figures listed in the table, it should be noted that this figure is based on an actual statewide census, conducted by EDD, of green jobs. Because it is based on census data and not inferential estimates, we use the EDD figure as our baseline.

As can be seen, even for the base year in the mid to late 2000s, there is a wide disparity—by roughly a factor of 10—in estimates of baseline (current) green jobs. This variation is understandable for a new field in which much employment occurs in small companies, whose information is not as extensively surveyed by government statistical authorities as is that of large firms. Additionally, as noted earlier, definitions of what constitutes a true "green" job are far from settled.

Equivalent information for California and for the nation is displayed in **Tables 3** and **4**. Some rows with no entries have been omitted to conserve space. Note that each of these tables displays only gross jobs gained in green occupations, omitting job losses in energy-intensive incumbent industries. (These are taken up in the next section.) All of these rates of change were summarized in **Table 2**.

Table 2: Green Job Estimates and Projections for Los Angeles Region

Year	Next 10, "Many Shades of Green", 2009, and "California Green Innovation Index," 2010	California Economic Strategy Panel, "Clean Technology and the Green Economy", 2008	U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008	EDD State Survey, 2010
2006	—	—	20,136	—
2008	58,000	16,500	—	—
2010	72,000	—	—	178,550*

*Note: Includes jobs in Ventura County.

Table 3 Green Job Estimates and Projections for California

Year	Next 10, "Many Shades of Green", 2009	UC Berkeley, "Addressing the Employment Impacts of AB 32", 2009	U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008	California Air Resources Board, "Climate Change Scoping Plan", 2008
	—	Low	—	—
2006	148,000	—	72,587	—
2007	155,000	—	—	—
2008	159,000	43,746	—	44,000
2020	—	64,746	—	—
2038	—	—	574,328	—
Annual % Change	3.65%	3.63%	6.90%	—

Table 4: Green Job Estimates and Projections for the United States

Year	Green Jobs Calculator, UC Berkeley Renewable and Appropriate Energy Laboratory, 2009	American Council for an Energy-Efficient Economy, "Positive Returns: State Energy Efficiency Analyses Can Inform U.S. Energy Policy Assessments", 2008		U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008
		Low	High	
2006	—	—	—	751,051
2009	500,210	—	—	—
2010	508,922	—	—	—
2011	516,100	—	—	—
2012	526,717	—	—	—
2013	532,684	—	—	—
2014	540,002	—	—	—
2015	552,248	—	—	—
2016	567,754	—	—	—
2017	582,774	—	—	—
2018	602,284	—	—	2,540,800
2019	623,991	—	—	—
2020	649,168	—	—	—
2021	659,836	—	—	—
2022	672,140	—	—	—
2023	686,121	—	—	—
2024	699,709	—	—	—
2025	711,882	—	—	—
2026	724,531	—	—	—
2027	738,006	—	—	—
2028	753,276	—	—	3,481,000
2029	769,683	—	—	—
2030	785,520	500,000	1,500,000	—
2038	—	—	—	4,214,700
Annual % Change	2.17%			5.72%

We will use a baseline census of 178,500 and assume growth rates between 3.6% and 6.9% based on California forecasts. (National forecasts are slightly lower, because they reflect growth off a larger base.) The projected LA-area green jobs in 2020, 2025, and 2030 are shown on **Table 5**. As noted, on the surface these estimates seem conservative, in that recent growth rates in capacity and investment have been far higher than the single digits. These projected growth rates appear not unreasonable.

We will, however, produce an alternative set of estimates, based on projected growth in volume of production. Such forecasts are provided by AEO, but because AEO does not forecast employment (only generation capacity and power consumption), it is necessary to make several adjustments to convert growth in unit volume into growth in employment. For example, most manufacturing industries improve the productivity of their labor each year (by adopting machines that replace some workers), so the same volume of sales requires fewer workers each year.

The most pertinent productivity growth information we have is from Germany, which shows a projected average increase in green component labor productivity from 2004 to 2030 of 2.8%. German data vary from 1.4% for the mature technology of hydropower to 4.1% for the relative immature one of photovoltaic solar power. Since American productivity growth typically has been slightly faster than European, and since higher productivity forecast lead to conservative job estimates, as a starting point we will assume an annual productivity growth of 3.0% per year (to be adjusted downward below).

Besides this productivity adjustment, we also adjust for improving energy intensity, as well as the countervailing effects of price sensitivity (as greater energy supplies encourage increased consumption). The adjustments are outlined in the methodological appendix. The net effect is to reduce projected employment growth from 3.0% to 1.5%.

Table 5. Forecast (f) Green Jobs in the LA Basin Based on Other Studies

	2010 actual	2020f	2025f
# of jobs @ 3.6%/yr	178,550	254,300	303,500
# of jobs @ 6.9%/yr	178,550	348,000	485,800

Table 6. Renewables National Volume Growth and Implied Growth in Employment

	2008	2015	2025	2035	Gr/yr
Volume of renewable power consumed nationally (quadrillion BTU)	3.25	6.27	7.00	7.26	3.0%
	2010				
# of LA renewable jobs (no prodtvty adj)	178550	207000	278200	373800	3.0%
LA renewable jobs (with adjustments)	178550	192300	223200	259100	1.5%

Sources: AEO reference case for U.S. volume; author's calculations to adjust to LA

Table 7. LA-area net jobs added in all sectors based on other studies

	2010 Actual	2020f		2040f	
		Low	High	Low	High
Total jobs	178,550*	207,200	240,000	279,100	433,400
Increase vs. 2010	NA	28,700	61,400	100,500	254,800

*Note: Includes jobs in Ventura County. Please refer to the tables in Appendix C for the net estimates for each level.

Source: Author's calculations, using growth rates from studies, applied to 2010 actual base.

NET EFFECTS

From our survey of other studies at the national, California, and LA regional levels, we culled or computed net job changes. Some studies provided this forecast explicitly, and we cite it. For the rest, we computed it by subtracting projected job losses for job gains in each forecast year. Interpolating from these studies we then composed the following synthesis in **Table 7**. These estimates are somewhat larger than the last line of **Table 6**, but in the same general ballpark, except for the "high" 2020 forecasts. This finding appears to offer additional credence to the Table 6 estimates, so the "with adjustments" line of Table 7 will be our "final answer."

CONCLUSIONS

Green jobs account for about 178,500 of roughly 4.5 million employed in the LA region in 2010, or about 3.9 percent of total employment, and perhaps 4.5% of private sector employment. However, the industry has grown, and is projected to continue to grow, substantially faster than the overall economy, so by the late 2030s the absolute number will increase by at least 60 to 100%. Green occupations in the late 2030s will represent between 4% and 8% of the roughly four million employed in the region (based on the California Department of Finance's population projections). The renewables industry's effects on personal income, and therefore prosperity, will be proportionally greater because anecdotal evidence suggests that these occupations have substantial skill requirements. Those skills allow workers to command wages with a 50% to 100% premium over the average job.

A statewide EDD census of green jobs conducted in 2010 found 178,500 green jobs in the Southern California region (which coincides with the region

examined in this study with the addition of Ventura County). EDD's census demonstrates the dynamism of this sector in LA. The region's share of state green jobs is somewhat higher than a simple proportion of state employment or population would suggest. So for this sector, LA appears to be among the most innovative regions of the nation's most innovative state.

The greater effect of policy is through energy research and development. The whole reason that policy is needed is because renewables currently cost more per kilowatt-hour than do fossil fuels. Technologists argue that "grid parity"—where operating costs of renewables are equal to those of conventional plants—is only a few years away. Spurred by a favorable climate of growing demand, falling component prices, and supportive policy, the green industry has seen rapid growth in the past decade. That growth will moderate, but will still exceed most other industries.

In sum, renewables power generation and related fields are well into the "takeoff" stage, not only in the U.S., but in many other countries also. While the Los Angeles region is hardly the only potential leading world-scale cluster of green technologies, it has one of the better prospects.

"We have plenty of problems in California…But we will only compound our problems if we abandon our aspirations for the quality of our environment. Our future is with a knowledge economy, and there is one thing we know for sure: Knowledge workers have lots of choices where to live, and they like to live in environments with clean air and green spaces. 'Silicon Valley' did not sprout in Silicon Valley by accident."

—George P. Shultz

APPENDIX A: SUMMARY OF OTHER STUDIES

The potential economic impact of climate-related regulation is addressed in the following studies and reports. For our analysis we were specifically interested in identifying how the various authors addressed employment—What industries would be affected, both positively and negatively, by placing a price on greenhouse gas (GHG) emissions? Additionally, we sought to collect quantitative data related to both current and future employment levels within these select industries as well as economy-wide.

Appendix **Table A-1** provides an overview of the reference studies used in the development of this chapter. The studies appear in the rows while the columns provide descriptive information such as year of publication, geographic scope, industry segment(s), base year for employment estimates, final year for employment projections, implied jobs growth rate, basis for projections and any additional comments.

In order to adequately address America's energy future as well as the Los Angeles region's role in the development of green jobs, it was imperative that we sourced a diverse collection of previous work. The studies range in geographic scope from national to city level analyses. Employment forecasts, in some cases extending beyond 2030, offer contrasting depictions of what GHG regulation may mean for the United States.

To calculate the implied jobs growth rate we first computed a simple gross percentage change in employment based on the final jobs projection and the baseline jobs estimate (or earliest jobs projection if baseline was not available).

$$\textbf{Gross Percentage Change} = \frac{(\text{Final Jobs Projection} - \text{Baseline Jobs Estimate})}{\text{Baseline Jobs Estimate}}$$

Once we had the gross percentage change, we then calculated the implied annual growth rate using the following compounding formula.

$$\textbf{Annual Growth Rate} = \left\{ (1 + \text{Gross Percentage Change})^{\left(\frac{1}{\text{no. of years}}\right)} \right\} - 1$$

Further details on these studies and our interpretations are contained in the main body of this chapter. Please see the Bibliography for complete citations on each study.

Table A-1: Summary of Studies Reviewed

No.	Year	Author	Title	Geographic Scope	Industry	Base Year for Estimates	End Year for Projections	Jobs Growth Rate (%)	Basis for Projection
1	2010	Kreutzer, D, et al. For the Heritage Center for Data Analysis.	A Renewable Energy Standard: What It Will Really Cost Americans	U.S.	Economy-wide	2012	2035	(7)	California law now has a 33% by 2020 Renewable Electricity Standard as adopted by CARB on September 23, 2010.
2	2009	Wei, M., Patadia, S. & Kammen, D. Energy and Resources Group & Hass School of Business, University of California, Berkeley	Putting renewables and energy efficiency to work: How many jobs can the clean energy industry generate in the US?	U.S.	Green Sector	2009	2020	na	The model synthesizes data from 15 job studies covering renewable energy (RE), energy efficiency (EE), carbon capture and storage (CCS) and nuclear power. The paper employs a consistent methodology of normalizing job data to average employment per unit energy produced over plant lifetime.
3	2009	Collaborative Economics for Next 10	Many Shades of Green	CA	Green Sector	2006	na	na	Used the Green Establishments Database, which is a composite database that draws information from multiple sources (including New Energy Finance and the Cleantech GroupTM, LLC) for the identification and classification of green businesses and also leverages a sophisticated internet search process.
				LA Area				na	
4	2009	Collaborative Economics for Next 10	Green Innovation Index	CA	Green Sector	2007	na	na	Used the Green Establishments Database, which is a composite database that draws information from multiple sources (including New Energy Finance and the Cleantech GroupTM, LLC) for the identification and classification of green businesses and also leverages a sophisticated internet search process.
5	2009	Zabin, C. & Buffa, A. University of California, Berkeley Center for Labor Research and Education.	Addressing the Employment Impacts of AB 32	CA	Green Sector	2008	2020	3 to 12	E-DRAM and BEAR forecasting models
6	2009	Economic and Technology Advancement Advisory Committee for the California Air Resources Board	Advanced Technology to Meet California's Climate Goals	CA	Green Sector	2007	na	na	Sources Next 10's 2009 Green Innovation Index
7	2008	Collaborative Economics for California Economic Strategy Panel	Clean Technology and the Green Economy	CA	Green Sector	2008	na	na	The California Regional Economies Project is currently the lead research mechanism for the Panel to identify economic policy issues and growing industry sectors. The project provides the state's economic and workforce development systems with data and information about changing regional economies and labor markets.
				LA Area				na	
8	2008	Roland-Holst, D. Center for Energy, Resources, and Economic Sustainability, University of California, Berkeley.	Energy Efficiency, Innovation, and Job Creation in California, 2008	CA	Economy-wide	2006	2020	6	Implementation of a statewide economic model, the Berkeley Energy and Resources (BEAR) model and historical data from the U.S. Bureau of Economic Analysis
9	2008	California Air Resources Board	Climate Change Scoping Plan	CA	Economy-wide	2008	2020	9	Forecasted using the Environmental Revenue Dynamic Assessment Model (E-DRAM) and various government data sources.
10	2008	Laintner, J. & McKinney, V. American Council for an Energy-Efficient Economy	Positive Returns: State Energy Efficiency Analyses Can Inform U.S. Energy Policy Assessments, 2008	U.S.	Green Sector	2008	2030	na	Analyses 48 different studies that explore the possibilities of further gains in energy efficiency.
11	2008	Global Insight—for the United States Conference of Mayors and the Mayors Climate Protection Center	Current and Potential Jobs in the U.S. Economy	U.S.	Green Sector	2006	2038	6	Data is from the National Establishment Time Series (NETS) database by Walls & Associates. Renewable Power Generation Jobs are not available in NETS.
				CA				7	
				LA area				7	

APPENDIX B: METHODOLOGICAL ISSUES

There are a number of methodological decisions analysts of green jobs must make. This appendix highlights a few of them, and explains the rationale behind the choices we have made.

CONSISTENT SCOPE

Studies should be explicit about the geographic scope of the purported employment changes, positive or negative. This study emphasizes employment in the LA region, because it is already home to the nation's second largest green cluster. Our geographic scope is Los Angeles, Orange, San Bernardino, Riverside and Ventura counties (Ventura County is included because the EDD census for Southern California included Ventura County).

We adopt the definition of green jobs used by the EDD's Labor Market Information Division (LMID) in its recent survey of statewide green employment. See the main text for the definition.

BASE YEAR AND ASSUMED EMPLOYMENT GROWTH

Most studies estimate green jobs in a base year (e.g., somewhere between 2008 and 2010), then extrapolate forward. Typically the extrapolation is based on assumed growth in volume demand for green products and services (e.g., renewable energy generation, or energy efficiency construction and retrofitting.) This study examined a range of previous estimates at the global, national, state, and regional levels, choosing volume demand growth rates in the rough center of the range of prior estimates. However, as noted below, we also recognize that employment growth will not rise as quickly as volume growth, because of anticipated labor productivity improvements

DILUTIONS TO GREEN JOBS' DEMAND

Many studies project growth in demand for renewable energy, than assume that green jobs will grow proportionately. This is unlikely for several reasons which will cause employment to grow more slowly than output.

- **Transmission and distribution (T&D) constraints.** Most large scale renewable generation (e.g., dams, wind turbines and photovoltaic farms) is built where the power source is, not where customers are. Full use of their potential requires transmitting the power renewables generate to the customer's vicinity, then distributing it to their specific location. But there are major barriers to the expansion of T&D infrastructure. Costs can be exorbitant, even with federal stimulus funds currently available. And local "NIMBY" political opposition often blocks the erection of such infrastructure. Even during the 2000-01 electricity crisis, local opposition prevented the siting of at least one transmission line that could have brought more power to Southern California during a time of severe local shortages.

- **Experience curve and productivity effects.** Many production processes become more efficient over time, as the producers learn and improve from experience. The general term for this is the "experience curve", reflecting the decline in unit costs that results as cumulative experience (measured in terms of units produced) expands. Experience effects tend to be proportionally greatest in the early stages of a technology, and gradually decline with cumulative units sold. (As noted, a mature technology such as fossil fuel-generated technology therefore has an inherent cost advantage over renewables, which are much earlier in their life cycle and have not captured most experience benefits.) More accurate job growth estimates require the analyst to use projected labor productivity growth to translate from output growth to employment growth. For example, if annual demand growth in a given sector was projected to be 2%, and productivity growth in that sector was projected to be 3% per year, employment could be expected to <u>shrink</u> by 1% per year (2% minus 3%), not grow by 2%. We reflect the best available productivity information in our calculations.

- **Price change effects.** The increase in the price of a commodity will commonly cause less of it to be demanded, as consumers who do not value it at the higher price switch to substitutes or do without. The reverse is true when prices decrease. Economists commonly translate price changes into changes in quantity purchased through the *price elasticity of demand,* often known as "demand elasticity". This capture the percentage change in quantity demanded per one percent change in price. Previous work by Forward Observer determined that a reasonable estimate for the demand elasticity for energy as -1.5. That is, each one percent increase in energy prices would reduce the quantity of energy demanded by 1.5%.

- **Multipliers.** Input-output economic modeling recognizes that the direct effects of an economic change (e.g., due to a policy change) will also have secondary effects (called "ripple effects" in the main body of this chapter.) Regional economists distinguish between indirect effects on suppliers and customers, and induced effects on more distant entities affected by the change.

This study has relied on industry-level multipliers from the U.S. Department of Commerce Bureau of Economic Analysis' Regional Input-Output Modeling System (RIMS II). It combines all three effects—direct, indirect, and induced—into a single multiplier" that is a coefficient of the direct effect. For example, a total jobs multiplier of 2.5 implies that the combination of all three effects is 2.5 times that of direct effects alone; so a loss or gain of 1,000 jobs in a directly affected industry will result in a change of 2,500 total jobs across the economy.

Multipliers exist for several economic variables, including output (GDP, measured in dollars); personal income (also in dollars), and employment (measured in jobs, or job-years).

Generally, the largest the geographic scope of a multiplier, the higher its magnitude, since trade outside the region can transmit the effects of a change more widely. Conversely, a multiplier for a smaller region will generally be smaller than its analog for larger one, like a state or a nation.

Industries with high productivity per worker (i.e., which add a high level of value per worker, and which generally are more profitable) typically have higher multipliers, because the industry's expansion allows expanded savings to be passed on to suppliers (and conversely, its contraction hits suppliers hard.) A common mistake made by advocates is to overestimate multipliers for a given industry. For example, recently, unemployment has remained stubbornly above the early 2009 estimate of the president's Council of Economic Advisers' projection of the likely effect of the fiscal stimulus passed in Feb. 2009. Some critics have argued that the CEA's use of an assumed average multiplier of 1.5 was overly aggressive. However, it is quite in keeping with economic norms.

APPENDIX C:
COMPUTATION OF NET JOB CHANGES

Tables C-1, **C-2** and **C-3** display the computed net job change estimates for each level.

Table C-1: Net Job Changes for the United States

Year	Green Jobs Calculator, UC Berkeley Renewable and Appropriate Energy Laboratory, 2009	American Council for an Energy-Efficient Economy, "Positive Returns: State Energy Efficiency Analyses Can Inform U.S. Energy Policy Assessments", 2008		U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008
		Low	High	
2006	—	—	—	751,051
2009	500,210	—	—	—
2010	508,922	—	—	—
2011	516,100	—	—	—
2012	526,717	—	—	—
2013	532,684	—	—	—
2014	540,002	—	—	—
2015	552,248	—	—	—
2016	567,754	—	—	—
2017	582,774	—	—	—
2018	602,284	—	—	2,540,800
2019	623,991	—	—	—
2020	649,168	—	—	—
2021	659,836	—	—	—
2022	672,140	—	—	—
2023	686,121	—	—	—
2024	699,709	—	—	—
2025	711,882	—	—	—
2026	724,531	—	—	—
2027	738,006	—	—	—
2028	753,276	—	—	3,481,000
2029	769,683	—	—	—
2030	785,520	500,000	1,500,000	—
2038	—	—	—	4,214,700
Annual % Change	2.17%			5.72%

Table C-2: Net Jobs for California

Year	Next 10, "Many Shades of Green", 2009	Next 10, "Green Innovation Index", 2009	UC Berkeley, "Addressing the Employment Impacts of AB 32", 2009		California Air Resources Board, "Advanced Technology to Meet California's Climate Goals", 2009	California Economic Strategy Panel, "Clean Technology and the Green Economy", 2008	UC Berkeley, "Energy Efficiency, Innovation, and Job Creation in California", 2008	U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008	California Air Resources Board, "Climate Change Scoping Plan", 2008
			Low	High					
2006	148,000	—	—	—	—	—	—	72,587	—
2007	155,000	105,000	—	—	100,000	—	—	—	—
2008	159,000	—	43,746	—	—	43,746	—	—	44,000
2010	—	—	—	—	—	—	77,400	—	—
2020	—	—	64,746	163,746	—	—	141,400	—	120,000
2038	—	—	—	—	—	—	—	574,328	—
Annual % Change	0.23%		3.63%				6.00%	6.90%	8.72%

Table C-3: Net Jobs for the Los Angeles Region

Year	Next 10, "Many Shades of Green", 2009	California Economic Strategy Panel, "Clean Technology and the Green Economy", 2008	U.S. Conference of Mayors, "Current and Potential Jobs in the U.S. Economy", 2008	EDD Statewide Green Jobs Census, October 2010
2006	—	—	20,136	—
2008	58,000	16,500	—	—
2010	—	—	—	178,550
2038	—	—	159,321	—
Annual % Change			6.90%	

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ENDNOTES

1 See “Comments on the ARB’s Updated Economic Impact Analysis” by the Economic Impacts Subcommittee of the Economic Allocation Advisory Council, http://www.arb.ca.gov/cc/scopingplan/economics-sp/updated-analysis/updated_sp_analysis.pdf

2 The most complete and precise definition of “green jobs” the author has encountered is in the Next 10 report. The Bureau of Labor Statistics has also published early attempts to develop definitions and a labor accounting system for these occupations.

6

UNEMPLOYMENT IN CALIFORNIA:

DOES TEXAS HAVE THE ANSWER?

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Politicians and policy makers around the country have been looking at Texas to ascertain what might be the lessons of the "Texas Miracle."[1] Examining those issues is a useful exercise as Texas is the leader in job creation in the U.S. From August 2010 to August 2011, the net job addition to payroll employment in Texas has been 253,200. California was second at 171,300,[2] but California is half again as large as Texas. When it comes to low unemployment, Texas is not the clear leader, but is doing better than the U.S. and substantially better than California.

It is important to distinguish between these two measures of success as unemployment is influenced by net job creation, the mix of potential jobs, the workforce skill set, and the size of the labor force. Elsewhere we have considered the question on what California can learn from Texas with respect to job creation, and this will be summarized in the next section.[3] In this chapter, we focus on the other aspect of the "Texas Miracle," unemployment.

As unemployment is a much more complex measure, our results are more nuanced. Nevertheless, by comparing unemployment in cities in Texas with those in other parts of the Southwest and West and we can learn much about current unemployment differentials, particularly as they apply to the high unemployment rates in the inland parts of California. This article proceeds with a brief review of the employment differentials, a discussion of the data employed in our analysis of unemployment, the results of the statistical analysis, and some thoughts on the policy implications as they apply to California.

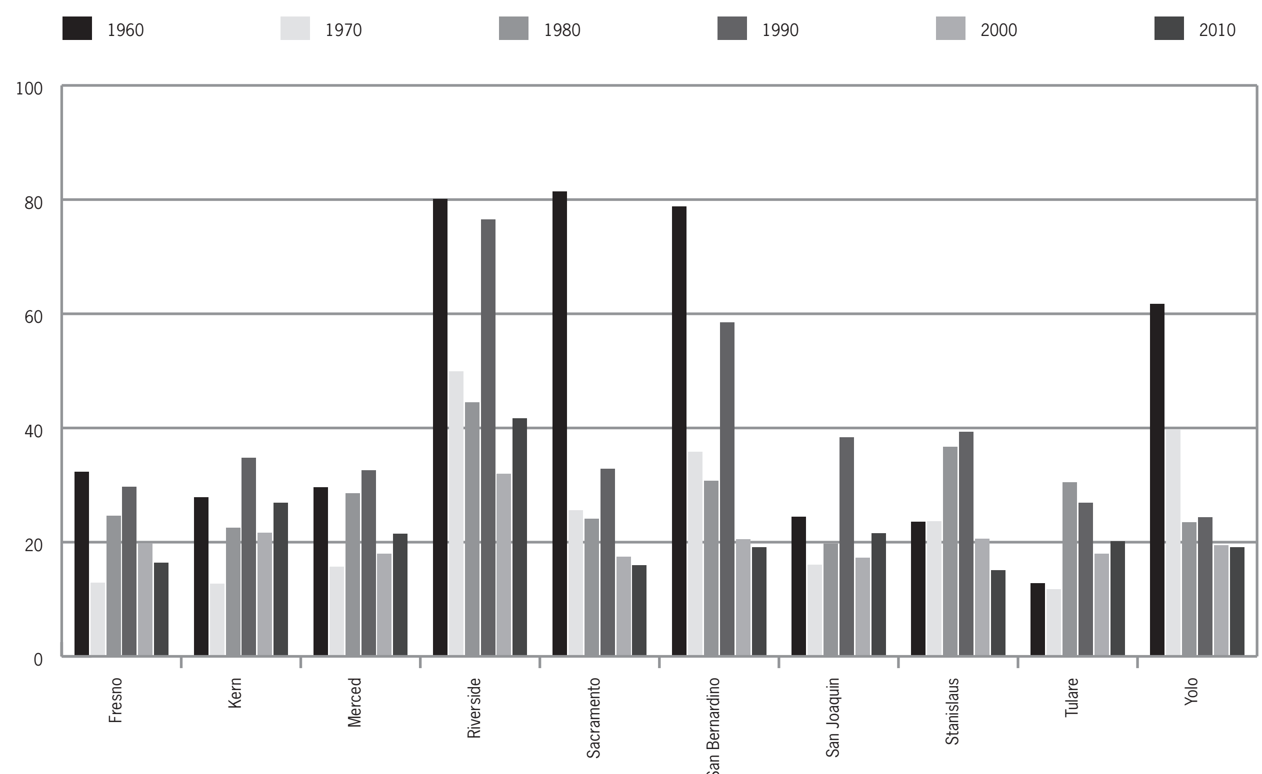
THE TEXAS MIRACLE: JOB GAIN

A first look at the employment data and it is clear that Texas Governor Rick Perry is right in boasting about job gains. His state has been consistently outperforming the Golden State for some time. In the above-cited article we outlined why this is the case. Texas is certainly business-friendly if viewed from the perspective of corporate and personal income taxes. And Texas purports to have a more easily traversed regulatory system. Nevertheless, a principal advantage that Texas has, not just over California but over many other states, is an abundance of land, of semi-skilled labor, and of energy. An analysis of the pattern of job formation confirms that these advantages swamp business conditions as an attractor of new business and a creator of jobs.

COMPARATIVE ADVANTAGE AS A CONCEPTUAL FRAMEWORK

The concept of comparative advantage is an old one in economics stretching back to David Ricardo in the early part of the 19th Century.[4] Basically, it lays out the gains from trade by showing that when countries, or states in this case, produce that which they are relatively better at—and trade for that which they are not, the total amount of production increases. Economists since Ricardo have shown that in a free market system without barriers to trade, production will gravitate to geographies which have a comparative advantage in that kind of production.[5]

Figure 1: Population Growth By Decade



In the 1950s, 1960s and 1970s California's land was relatively abundant. While land costs still brought a premium, it was in part compensated by weather differentials and in part by a continual influx of skilled labor. By the 1990s California had, in a sense, filled up in many areas, as Figure 1 illustrates. Land was being rationed through higher prices because more people wanted to take advantage of California's weather and recreation than was possible to accommodate. As a result, California was transformed into as state with expensive land and relatively expensive labor. Comparative advantage would tell us that California would lose business which used land and labor intensively in favor of high value added, land conserving activities.

COMPARATIVE ADVANTAGE APPLIED

In comparing Texas with California, we find exactly that pattern. To be sure, California did not generate jobs as rapidly as Texas did, and those jobs that Texas generated were the kinds of jobs that California generated through most of the postwar period. So it looked as if Texas was stealing jobs from California. The prime suspect appeared to be the aforementioned tax and regulatory environment. Yet, without addressing the high cost of land and labor in the Golden State, no amount of tax and regulatory reform would suffice to stem the long-run trend in California away from traditional manufacturing and semi-skilled labor intensive services. Moreover, there is no way to lower the cost of land in the long run so as to reverse this trend, as there is quite simply a limited amount of coast line and view-endowed hillside relative to California's present and future population.[6]

The analysis then considered whether California competed well against Texas in any sectors. The answer again turned on the question of comparative advantage. Sectors which were knowledge heavy and were intensive in high-value-added labor, with the exception of those in the energy industry, did relatively better in California than in Texas. Consistent with the importance of resource endowments in the generation of jobs, energy sectors performed better in Texas, while agriculture and wine production did better in California.

Finally the creation of jobs has a multiplier effect. Texas' growth in manufacturing, call centers, and back office activity drew in migrants from the North and Northeast, from Mexico, and to some extent from California. Moreover, hurricane Katrina created a flood of refugees to the Lone Star State. These new Texans needed doctors, lawyers, firemen, police, school teachers and a host of other services thereby creating a multiple job creation effect.

THE TEXAS MIRACLE: UNEMPLOYMENT

So it is natural that Texas would create jobs more rapidly than California, but is it necessarily true that Texas should have an unemployment rate substantially below that of California? After all, if the jobs are moving to Texas, why don't the people follow them? And if they do follow the jobs, then there is no net affect on unemployment rates, simply on population. In 2010, the California unemployment rate was 12.4% and the Texas rate was 8.2%, a differential in Texas' favor of over 4 percentage points. It appears that the differential in unemployment rates between Texas and California may be due in part to something other than factories in the East Bay of California or in Riverside closing down and moving out of state. What is the cause?

To answer this question we look at data for unemployment rates in cities across the Southwest

and Pacific States. Specifically for each city with a population of 200,000 or more we examine four factors.

1. The relative size of the housing expansion and contraction.

2. The relative size of loss of jobs in construction and government.

3. The relative size of the oil, mining and gas extraction industries

4. The 2007 migration patterns.

HOUSING

The first of these factors is examined to ascertain whether or not a speculative bubble occurred and how large was it. If a bubble drew people into construction and induced them to obtain requisite training, then the bursting of the bubble would leave them with skills no longer in demand. This process ought to induce *structural unemployment* which, when observed in large numbers, takes years to bring down. To measure the size of the bubble, the difference between the percentage decrease in construction employment in the bust is subtracted from the percentage increase in the boom. Thus, higher values of this measure represent a smaller boom. Calculating the measure in this way neutralizes the effect of increased construction employment due to the housing needs generated by population growth.[7]

CONSTRUCTION AND GOVERNMENT

The second factor is to capture the absolute impact of shrinking government budgets and shrinking construction sectors, two sectors which are important sources of jobs in the inland parts of California. The reliance on these two sectors, it has been argued, is responsible for the current state of unemployment in this region. The employment data used are the percentage of the 2006 work force lost in these two sectors between 2006 and 2011.[8] These sectors are not likely to grow rapidly in the future and if they are significant, they are an indicator of a structural unemployment problem.

OIL, MINING, AND GAS

The third variable is included to pick up the impact that the expanding energy sector has had on employment. It is often argued that the lower rates of unemployment in Texas are due to the energy boom. We have included energy rich cities such as Oklahoma City and Tulsa in the sample as well. The energy data is the average percentage of the workforce engaged in mining or oil and gas extraction from 2005 to 2009.[9]

MIGRATION

The fourth is designed to measure the impact of migration. As new residents come into an area they demand goods and services. They need a place to live, stores to shop in, schools for their children to attend, and public safety services. The greater the migration, the more jobs will be created. A downside is that the initial impact of migration may also be to raise the unemployment rate. The migration data are the United Van Lines percentages of total loaded trips into the state where the city resides in 2006.[10]

Table 1: Regression of Increase in Unemployment: Second Quarter 2006 to Second Quarter 2011

Regression Statistics	
R Square	0.72
Adjusted R square	0.68
Standard Error	0.013
Observations	37

	Coefficients	Standard Error	t Stat
Intercept	0.122	0.035	3.516
Relative Bubble Size	1.082	0.212	5.095
Texas dummy	1.171	0.264	4.434
Employment Drop	-0.885	0.127	-6.994
Mining Oil and Gas	-0.102	0.050	-2.058
UVL Directional Traffic	-0.148	0.067	-2.209

EFFECT OF RISING UNEMPLOYMENT

What we are trying to explain is the increase in the unemployment rate from the second quarter of 2006 to the second quarter of 2011. Table 1 presents our regression results. The factors we analyze explain about 72% of the increase, i.e., the R Squared value is 0.72. What we find is that for every 1% increase in the bubble, there is a corresponding approximately 1% increase in the unemployment rate, i.e., the regression coefficient is 1.08. A 1% decrease in government and construction employment yields a .885% increase in unemployment. The mining, oil and gas measure does not have a straightforward interpretation as the other variables, but picks up the impact of rising energy prices. A larger energy sector is significantly correlated with a small reduction in the unemployment rate. Finally a 1% increase in migration into the state is associated with a .148% decrease in unemployment.

The model is quite clear about how to avoid high unemployment rates such as those experienced in the inland region of California. If you can avoid a housing bubble and do not have to cut government spending, you can avoid an outsized unemployment rate. It may still be high, the rate in Texas is over 8%, but it will not be as high as currently being experienced from Sacramento to El Centro.

For a variety of reasons Texas avoided a housing bubble, but California seems to be more prone to bubbles, first dot-com stocks and then housing. In the last two recessions California has fared worse than the rest of the U.S. due in large part to these asset bubbles. This tendency may be the nature of the California economy, or it may be facilitated by policy which allows for easy money mortgages and restrictions on building. In fact, for an entrepreneurial economy such as California, avoiding asset bubbles from time to time may be neither possible nor practical. But what we learn from this is that much of the unemployment differential (not the job formation differential) is explained by the fact that California had a particularly acute housing boom and bust cycle and not by some other unknown factors.

MORE TO THE STORY

But there is a caveat. The analysis included a Texas specific variable designed to measure whether or not there was some specific Texas effect, different from elsewhere. This variable turned out to be significant and important. In other words, something else is also going on in Texas and our model does not capture it. In part this result may be due to Texas catching up with migration over the previous five years. When new migrants come in, whether they are disaster refugees from Katrina, illegal immigrants from Mexico, or displaced factory workers from the North and Northeast, their demands for services are not instantly translated into new jobs.

For example, a school district does not ordinarily build new schools and hire new teachers in anticipation of an increase

in school age population but rather in reaction to it. So the migrants of 2000 to 2010 would induce the district to add classrooms and staff in 2009 and 2010, a circumstance that maybe only partially picked up by our 2006 United Van Lines directional moving data. So there is something more to the Texas unemployment story though it is difficult to ferret out the explanation through the data. This may well be the differential effect of the differences in business regulation and regulatory compliance, or it may stem from other Texas specific factors.

IMPLICATIONS

To understand what this finding means in terms of policy we need to look to Inland California. This is where the housing bubble was so acute and this is where unemployment rates are some of the highest in the country at this writing. Since World War II, Inland California has had some of the highest population growth rates in the U.S. In virtually every decade cities in this region have grown by nearly 20% and often by much more.[11] A high growth rate requires a large residential construction sector and in fact, we find employment in construction to be a much more significant factor in the inland parts of the state.

The problem California is facing now—one which Texas has not yet faced, but ultimately will face—is that population growth at rates of 10% to 70% decade after decade is not sustainable. In the case of inland California, these growth rates have been sustained by foreign immigration, immigration of families with jobs in the coastal cities in search of more affordable housing, and job opportunities drawing immigration from other states. Today, with the population younger and more prone to living in multi-family housing nearer the coast, with gasoline prices increasing the cost of commuting, with the fall in home prices along the coast, and with more stringent lending standards for families wishing to purchase a home, the outward migration from the coastal cities is greatly diminished. With the slowdown in immigration and the increasing attractiveness of immigrant communities in other parts of the U.S. the growth due to foreign immigration has slowed down. And finally, without the population growth pressures from these two sources, the growth in jobs has ground to a halt, thus making inland California not as attractive to migration from elsewhere in the U.S. Even though the next Census of Population won't be taken until 2020, it does not seem likely that the 2010-2020 decade will have anywhere near the population growth of previous decades.

What this likely slowdown means is that the construction sector in the inland parts of California is too large. Many in the construction trades will not be able to find employment in the same field even after the economy begins growing again. They will either retire early, move away, or need to find new skills in another area. Typically this is a six to seven year process after the decline in employment ends.[12] Since the decline in employment had not ended as of this writing, the implication is for a process of skill transformation through at least 2017.[13]

CONCLUSIONS

In sum, what we learn from Texas is that California's problem is quite different. Public policies which spur economic growth and job creation in Texas, while not without impact if applied in California, do not address the problem of a mismatch of skills. Therefore policy in California ought to have two goals. First, policy should encourage and develop industries which can provide new engines of income growth in the inland parts of the state. Second, policy should recognize that structural unemployment is going to be a long term problem and addressing that problem requires putting into place the appropriate educational structure to assist the displaced government and construction (and other) workers in acquiring appropriate skills for the new jobs and industries of the coming decades.

ENDNOTES

1 For example: Judy Lin, "Calif. Delegation to Visit Texas, Study Job Growth," Associated Press, April 6, 2011.

2 U.S. Bureau of Labor Statistics, Regional and State Employment Summary, September 16, 2011, http://www.bls.gov/news.release/laus.nr0.htm. These are the latest data available at this writing.

3 Nickelsburg, Jerry (2011) "Comparative Advantage and Job Formation in California and Texas," California Journal of Politics and Policy: Vol. 3: Iss. 1, Article 25.

4 David Ricardo, *On The Principles of Political Economy and Taxation*, 1817.

5 One of many examples of this is found in Paul A. Samuelson, "The Gains from International Trade," *Canadian Journal of Economics and Political Science* 5(2), 1939.

6 For an interesting exposition on the relationship between limited land and wages see: Joseph Gyourko, Christopher Mayer, Todd Sinai, "Superstar Cities," NBER Working Paper No. 12355, July 2006

7 Data Source: Bureau of Labor Statistics, http://www.bls.gov

8 Data Source: Bureau of Labor Statistics, http://www.bls.gov

9 Data Source: American Community Survey, http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=datasets_2&_lang=en

10 Source: United Van Lines, http://www.unitedvanlines.com/mover/united-newsroom/press-releases/2007/2006-united-migration-study-04-07.htm

11 Source: California Department of Finance, http://www.dof.ca.gov/research/demographic/state_census_data_center/historical_census_1850-2010/view.php

12 Jerry Nickelsburg, "Did It Really Stay In Housing?," UCLA Anderson Forecast, June 2008.

13 Data Source: California EDD, http://www.labormarketinfo.edd.ca.gov

7

CALIFORNIA, WE HAVE A PROBLEM!

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On November 28, 2008, the Business Cycle Dating Committee of the National Bureau of Economic Research made it official; the U.S. had been in a recession since December 2007.[1] To the real estate industry, the announcement was not a surprise. By the end of November 2008, the industry had been both a cause of and felt the impact of the recession. For example, during the eleven months before the recession was officially declared:

- The S&P/Case-Shiller home price index declined by more than twenty-five percent.[2]
- Housing starts decreased by more than seventy-one percent.
- The sales of commercial properties decreased by eighty-five percent.
- There was a meltdown of the credit markets; Mortgage-backed securities (MBS) issuances dropped to nearly zero and delinquencies for all type of mortgages increased.

California has not been immune to the recession.

- The State's rate of unemployment increased from almost five percent during January 2007 to over twelve percent, before beginning to decline.
- The S&P/Case-Shiller home price index declined by more than thirty-seven percent for Los Angeles, San Diego, and San Francisco during the period between January 2007 and July 2011.
- The Los Angeles County 90-day delinquency rate for June 2011 was more than eight percent.
- Major sources of State revenue for the 2011-12 fiscal year declined by more than thirteen percent relative to those of the 2006-07.

As of this writing, it is clear that the Nation, the State and local governments are in the midst of an exceptionally serious economic decline, often termed the Great Recession. While the downturn was not isolated to housing markets, it is difficult to envision an economic recovery without a recovery in the housing market.[3]

The Great Recession has, at all levels of government, resulted in decreases in revenue and in increases in the demand for government services, a problem that is especially severe for California.[4] In his chapter, we will contend that declines in California home values are likely to result in continuing decreases in tax revenue for municipalities. That is, these declines are likely to outlast the current period of slow economic growth. To understand the origin of the problem, we start with a brief description of California's Proposition 13 of 1978.

Prop 13 tightly constrains property tax revenue, a major source of funding for local governments. In 2009, for example, local property taxes in California exceeded $51 billion. They accounted for over 40% of the revenues local governments raise on their own and over a fifth of revenue from all sources—including transfers from higher levels of government.[5]

IMPACT OF CALIFORNIA'S PROP 13

The starting point for California's system of property taxation is the market value of a property *at the time of acquisition*. This is referred to as the property's "base year value." After acquisition, the assessed value is subject to annual inflation increases of up to two percent. The cumulative assessed value of a piece of property that has not been sold since acquisition, *F*, is referred to as the property's "factored base year value."[6]

Equation 1.1 is a symbolical representation of the rules that determine a property's assessed value. At time, *T*, a property's assessed value is the minimum of the property's current market value, M_T, and its "factored base year value," F_T .

Equation 1.1

$$A_T = Min\ [\ M_T\ ,\ F_T\ ]$$

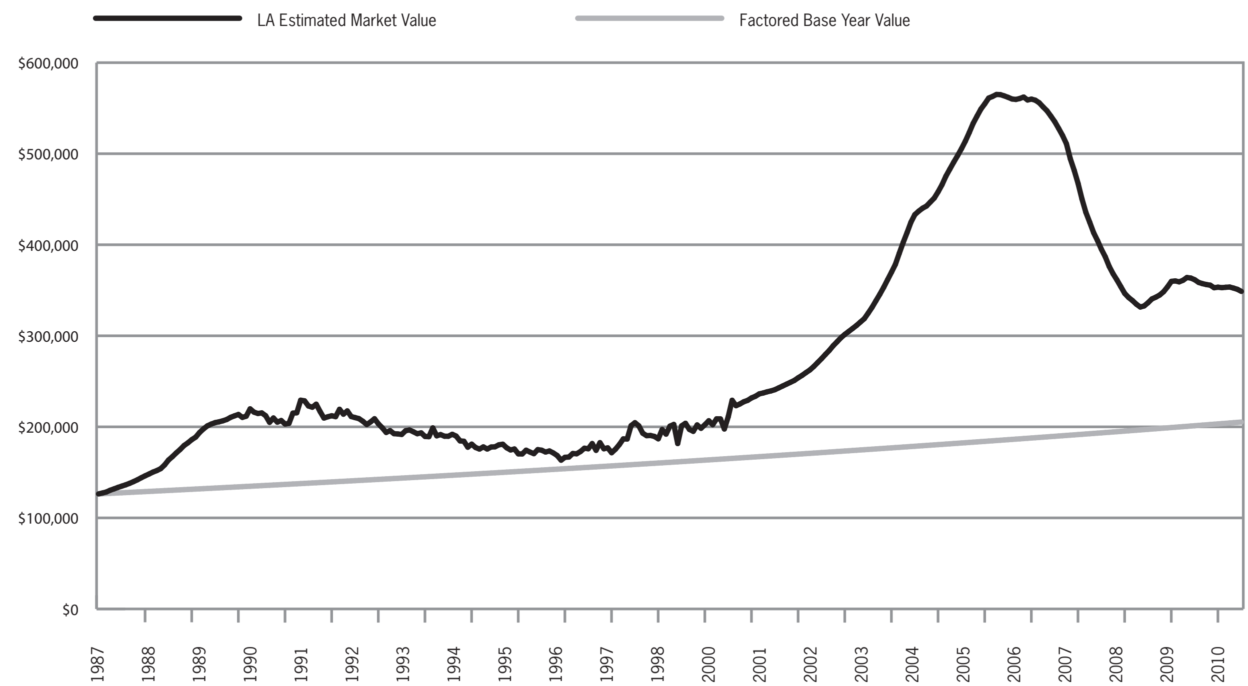
Real property is reappraised when a change in ownership occurs or new construction is completed. Properties reassessed as a result of a declines in market value (i.e., where $M_T < F_T$) may increase or decrease by any percentage, as long as the market value is less than the property's factored base year value. According to Proposition 13, the owner's property taxes are one percent of the assessed value. More precisely, under Proposition 13, the property tax rate is fixed at one percent of assessed value plus whatever additional amounts are required to repay any assessment bonds approved by voters.[7]

TWO EXAMPLES OF PROP 13 ASSESSMENTS

We now consider two examples to illustrate the peculiarities of Proposition 13's rules for determining the assessed value of a property. Figure 1 depicts the market value and factored base year value (as a dashed line) for a "typical" Los Angeles house bought during January 1987.[8] Figure 2 is a similar graph for a typical San Francisco home bought during January 2002.

In Figure 1, we can see both the decline in property values that occurred during the early 1990s and the bursting of the house price bubble that occurred in 2007. As can be seen from the figure, the factored base

Figure 1: LA Estimated Market Value (Acquired 1/1987) and Factored Base Year Value



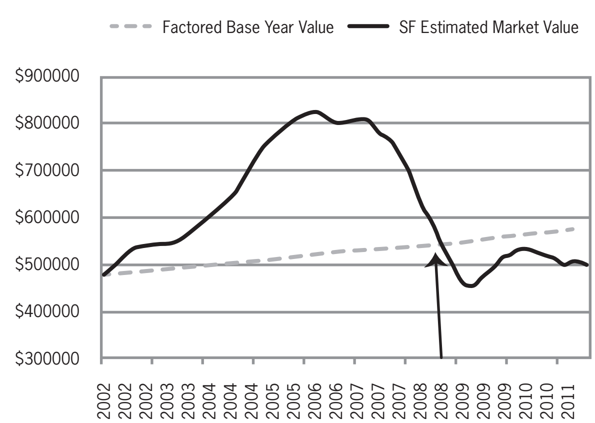
Note: The factored base value is the gray line.
Sources: California Association of Realtors and S&P/Case-Shiller.

year value was less than the market value for the *entire* period. Thus, in this example, property taxes would be one percent of the factored base value and these taxes would go up approximately two percent per year.[9]

While the economically inefficient aspects of Prop 13 are well known, this example illustrates two desirable features of its operation. First, in situations such as that pictured in Figure 1, the cost of assessment is relatively low; just multiply the purchase price by an easy-to-determine factor. There is no need for the local authority to make an elaborate determination of market trends. Second, the variance in property taxes is relatively low. The predictability of property tax receipts in normal times makes revenue forecasts and budgeting relatively easy.

Figure 2 presents similar information for a "typical" San Francisco home purchased during January 2002. Here we see that until July 2008, the estimated market value exceeds the factored base year value and property taxes will thus be based on the factored base year value. It follows that for the period 2002 through 2008, the revenue from property taxes for this house would be independent of what has happened to the housing market.

Figure 2: SF Estimated Market Value (Acquired 1/2002) and Factored Base Year Value



Note: The factored base value is the gray dashed line.
Sources: California Association of Realtors and S&P/Case-Shiller.

But after 2008, the market value is less than the factored base year value and property taxes should be levied on the market value of the home. The assessment process is less than perfect, however, so that in practice decreases in the assessed value and property tax revenue will lag the decreases in market prices. In fact, decreases in assessed value may (are likely to) depend upon the owner appealing their assessment.

If all San Francisco homes had been purchased during January 2002, property tax revenue would have been independent of the declines in property values experienced until July 2008. After this date they, at least by law, would mirror the changes in the market value of the property. What should be apparent from these examples is that the distribution of dates a property is acquired is an important factor in determining the impact of a negative demand shock on property tax revenue.

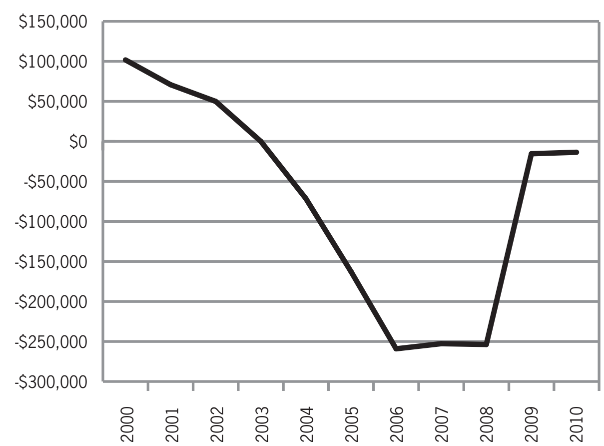
ADDITIONAL ASSESSMENT EXAMPLES

To further illustrate that point, we consider three California cities: Los Angeles, San Diego, and San Francisco. The variable we consider is the difference between the factored base year value and an estimate of the July 2011 market value of a typical home bought at an earlier point in time. Figure 3, 4 and 5 present data for such typical homes acquired at different points in times during the 2000 through 2011 period.

A positive value indicates that, for homes bought during January of that year, the July 2011 market value *exceeded* the factored base year value and the assessed value should thus equal the factored base value. A negative value indicates that the market value as of July 2011 was *less than* the factored base year value. In the negative case, the assessed value should be lowered to reflect the decline in property values, i.e., to the market value.

Figure 3 pictures the relationship for Los Angeles. For example, the figure shows that for a home bought during January 2000, the July 2011 market value would be over $101,000 greater than the factored base year value. Here the assessed value would be the property's factored base year value and the assessed value of the property would increase two percent year-over-year. From this figure we can conclude that for the typical LA home bought after January 2003, the assessed value needs to be lowered to reflect the decrease in market value of the areas homes.

Figure 3: LA Market Value Minus Factored Base Value (as of July 2011) for Typical Home Bought at Different Dates



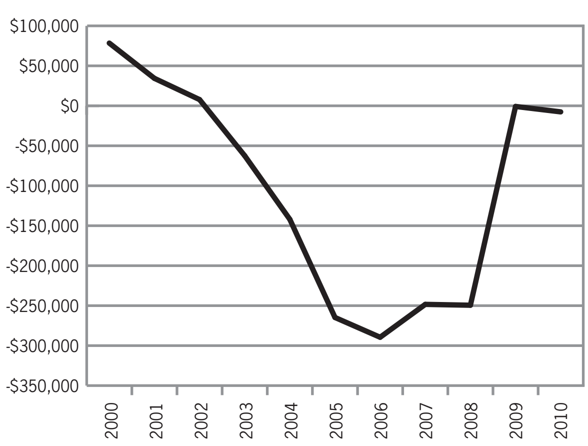
Sources: California Association of Realtors and S&P/Case-Shiller.

For homes bought between 2006 and 2008, the typical assessed values would have to be lowered by more than $250,000. This is a big deal, because it translates to a large decline in property tax revenue. In practice, the situation for a particular home could be worse than Figure 3 suggests. The typical home value can be thought as the mean of a distribution of 2011 home values. Depending on location and other factors, home price trends will vary around the mean. Some homes will decline in market value by more than average.

For homes whose values decreased more than average, the decline in assessed value and property tax revenue would be even larger than show on Figure 3. For homes whose market values are still larger than their factored base year value, their assessed value does not change and just goes up 2% a year. As noted earlier, under Prop 13 the volatility of tax revenue—given a tax rate—would be smaller than it would be if the assessed value equaled the property's market value. The overall result in any given jurisdiction will reflect the mix of homes whose assessment is going up 2% a year predictably and those whose assessed value has become based on market prices.

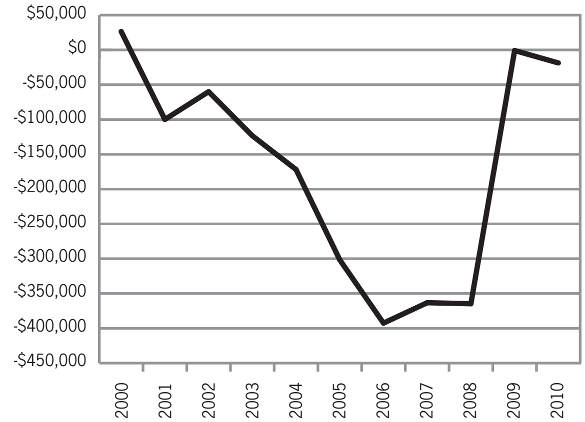
Figures 4 and **5** present similar information for San Diego and San Francisco. For both of these cities the declines of property values should (would) have had a relatively larger effect on assessments and property taxes than in LA. While the three cities considered are not representative of all of California, they illustrate an important impact of Prop 13 on revenues from property taxes. We can conclude that during normal market conditions, Proposition 13 tax revenues are less volatile than revenues would have been if the same rates were applied to an assessed value that was always reflective of the property's market value.

Figure 4: San Diego Market Value Minus Factored Base Value (as of July 2011) for Typical Home Bought at Different Dates



Sources: California Association of Realtors and S&P/Case-Shiller.

Figure 5: San Francisco Market Value Minus Factored Base Value (as of July 2011) for Typical Home Bought at Different Dates



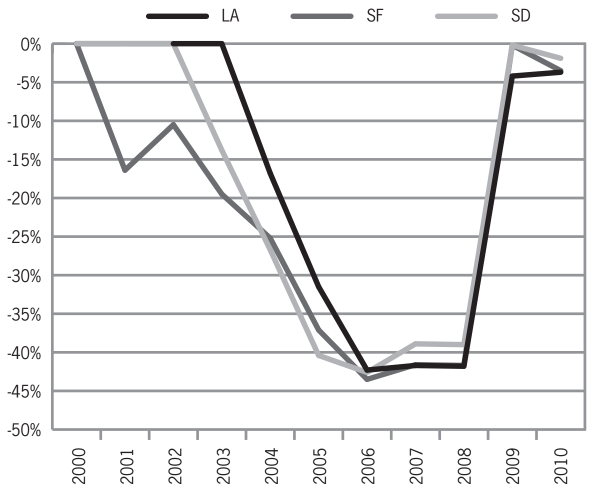
Sources: California Association of Realtors and S&P/Case-Shiller.

A key issue with respect to tax revenue is that under Prop 13, municipalities cannot raise tax *rate* to compensate for declines in property values and thus cannot prevent declines in tax revenues following a negative demand shock. That situation is a change from the situation that existed before Prop 13. At that time, property assessments were based only on market prices and localities could change their tax rates.

There is an odd distributional effect of Prop 13. In periods of generally rising real estate prices, comparable properties pay different taxes depending on when they were acquired. But this odd effect tends to be reversed by a negative demand shock in which the assessed value becomes the market value. If real estate prices fell so low that all properties were assessed at market values, comparable properties would all pay the same taxes.[10]

At this point no one knows what will happen to property values in the short-to-medium run. If property values recover relatively quickly, as they did during the mid- to late-1990s, the effect on tax receipts is likely to be relatively short lived. But given the overhang of defaults and foreclosures, it is unlikely that property values will return to their before shock level for a substantial period of time.[11]

Figure 6: Percentage Change in Assessed Values and Property Taxes for Typical Home Bought at Different Dates from Purchase Date to July 2011



Note: LA = Los Angeles; SD = San Diego; SF = San Francisco.

As a point of reference, **Figure 6** provides estimates of the percentage decline in assessed value and property taxes for typical homes acquired during different years. We can see that for the three cities, the assessed values—and therefore property taxes—should decrease by more than by thirty-five percent for properties acquired during the 2005-2009 period.[12] Absent further declines in property values, and as homeowners appeal their assessment or sell at the existing lower market prices, accessed values and property tax revenues will decline to reflect lower market value of properties. In and of themselves, decreases in property tax of these magnitudes would be a big problem for municipal finance.

DELINQUENCY AND FORECLOSURE

In many instances, California homeowners have responded to the Great Recession by curtailing or ceasing payments on their mortgage loan. In some cases ceasing to pay was a voluntary ("ruthless" default from the viewpoint of the lender). But in other cases, the decision was involuntary because of a change in the homeowner's economic condition.[13] A homeowner might have lost his or her job or might have been induced to take on a mortgage originally that was beyond his or her means by conventional standards. Whatever the cause, the prevalence of foreclosed properties or properties with seriously delinquent mortgage loans places a major overhang on home markets. That overhang in turn can have a large impact on property tax revenue by keeping home prices low. When the mortgage holders such as banks eventually take over the properties, they will resell them and the supply will tend to depress the market.

Table 1 presents March 2011 data that describe foreclosure rates and delinquency rates for the Metropolitan Statistical Areas of Los Angeles, Riverside-San Bernardino, San Diego, and San Francisco. The foreclosure rates range for these areas range between 3.6 percent for San Francisco to almost seven percent for Riverside-San Bernardino. While these rates are extraordinarily high by past

Table 1: Foreclosure and Delinquency

Metropolitan Statistical Area	3/2011 Foreclosure Rate	3/2011 Prime Foreclosure Rate	3/2011 Subprime Foreclosure Rate	3/2011 Serious Delinquency Rate	3/2011 90+ Days Delinquency Rate	12/09 Serious Delinquency Rate	3/10 Serious Delinquency Rate	3/11 Serious Delinquency Rate
Los Angeles	4.7%	3.6%	16.2%	9.9%	5.1%	11.9%	11.7%	9.9%
Riverside-San Bernardino	6.8%	5.1%	17.6%	14.6%	7.7%	19.6%	18.7%	14.6%
San Diego	4.0%	3.2%	15.5%	8.6%	4.6%	10.4%	10.2%	8.6%
San Francisco	3.6%	2.8%	16.4%	7.4%	3.8%	8.1%	8.1%	7.4%

Source: LPS Applied Analytic data at http://www.foreclosure-response.org/index.html

standards, they are not the most ominous statistic provided in the table.

What is most threatening is the rate of serious delinquency, i.e., homes that are more than 90 days delinquent. For all of the areas, the rate of serious delinquency is over twice the rate of foreclosure. For the Los Angeles area, this rate is almost ten percent and for the Riverside-San Bernardino area it was over fourteen percent. Once homeowners are more than ninety days delinquent, it is very difficult for them to cure their delinquency and avoid foreclosure.

If even a small fraction of the potential foreclosure and delinquent properties enter the for-sale market, the supply would be expected to have a very large negative effect on market prices and, therefore, on property tax revenue. Considering the magnitude of the problem, it is difficult to estimate the time path of the price effect of foreclosures. Given the desire of creditors to avoid the mark downs associated with the bursting of the housing market bubble, the decline in prices is likely to be extended. That is lenders may well try to avoid putting all their repossessed properties on the market at once. But they will keep feeding a steady supply of such properties into the market over a long period.

And there is another problem apart from the eventual market price effect. Before foreclosure, the tax impact of homeowner delinquency can be large. It is hard to believe that most homeowners who are seriously delinquent on their mortgage payments will nonetheless be paying their property taxes. In the long run, the loss of tax revenue may be limited by the fact that the municipality has a lean on the subject property. When it finally sells, the local jurisdiction will collect the payments the prior owners should have made. But this fact does not diminish the short-run negative effect on municipal finance that are denied the immediate cash they are owed.

CONCLUSION

If one looks across the country, most municipalities are having serious revenue problems caused by declines in home values. While portions of California, e.g., Riverside and San Bernardino Counties, have been particularly hard hit, the immediate impact was due to the market price decline in properties rather than to Prop 13. In fact the way that assessed values are determined under Prop 13 tends to reduce the declines in assessed values associated with the bursting of the housing bubble. Nonetheless, Prop 13 prevents localities from offsetting the market decline by raising the tax rate on properties since the rate is fixed at 1% under the proposition.

California, we have a problem. Its magnitude is large, given the fall in property values. Its period is extended due to the large overhang of foreclosed and delinquent homes that will be depressing the housing market for years to come. And, since the problem is linked to future trends in local house prices that are difficult to predict, localities face a major element of uncertainty in budget planning.

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ENDNOTES

1 The National Bureau of Economic Research (NBER) is a private, nonprofit research organization that, amongst other activities, is responsible for dating business cycles.

2 The index measures trends in home prices, adjusted for the quality of homes.

3 Leamer (2007) provides a convincing argument that "Housing IS the Business Cycle."

4 A November 17, 2011 *Los Angeles Times* article reports that deeper cuts to state budget are expected because of lower-than-forecast revenue and a budgetary "trigger" mechanism. See York and Riccardi.

5 See U.S. Census Bureau (2011), Table 1, available at http://www2.census.gov/govs/estimate/09slsstab1a.xls.

6 For example, if a home was bought for $200,000 during 2007 and the state's inflation rate was 3 percent during 2008 and 1 percent during 2009 the property's factored base year value for 2010 would be $200,000 x 1.02 x 1.01. Alternatively, if the rate of inflation was three percent and four percent in the two years, respectively, the factored base value would be $200,000 x 1.02 x 1.02.

7 http://boe.ca.gov/proptaxes/faqs/caproptaxprop.htm

8 The initial value (purchase price) for the homes is the California Association of Realtors' median sales price of an existing, single-family during the month in question. Later estimates for the market value of the home are imputed using the values of the S&P/Case-Shiller Home Price Indices. The factored base year value is the initial price adjusted for the 2% inflation factor.

9 Assuming there are no voter approved assessment bonds or special assessment districts.

10 In that extreme case, Prop 13 would still prevent localities from raising the tax rate above 1%.

11 The current decline in home values exceeds estimates for the decline that occurred during the Great Depression of the 1930s. The peak-to-trough fall in house prices in the Great Depression was 31 per cent—and prices took 19 years to recover after that downturn. See Shiller (2005).

12 The data used to generate this Figure are derived from the S&P/Case-Shiller Home Price Indices and an initial purchase price derived from the California Association of Realtors' medium home price index. As such, they are subject to a number of well-known biases.

13 Naïve models of optimization behavior suggest that any time owners have negative equity they will ruthlessly default, even if they can make their mortgage payments. Cauley and Pavlov (2002), provide a rational for foregoing default which would mitigate the impact of a negative demand shock on property tax revenue.

8

EYES IN THE SKY:

A FEASIBILITY STUDY OF IMPLEMENTING AN UNMANNED AIRCRAFT PROGRAM IN THE LOS ANGELES POLICE DEPARTMENT

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8

The Air Support Division (ASD) of the Los Angeles Police Department (LAPD) is the largest municipal airborne law enforcement organization in the world.[1] Founded in 1956, ASD is widely recognized as a pioneer in police aviation. The Division fights crime proactively by providing a critical patrol function, aerial surveillance and imagery, and support to ground officers with rapid response anywhere in Los Angeles.

The cost of police aviation poses budgetary challenges for the LAPD, especially given the economic climate in California since the Great Recession of 2008. ASD operates two helicopters on a daily basis, flying in 2.5-hour shifts for 20 hours per day. A third aircraft operates on Friday and Saturday nights, and may also be used on other days as circumstances dictate (Smith 2011). While there is no separate budget item for ASD, operating the helicopter fleet costs the LAPD anywhere between $15-40 million per year, or roughly 1-3% of its operating budget.

Although Unmanned Aerial Systems (UASs) have long been used successfully in military applications, they have yet to be widely used for domestic policing purposes. Whether UASs can be safely flown by police within U.S. airspace is now being extensively examined by the Federal Aviation Administration (FAA). One of the driving factors behind this initiative is the potential for unmanned aircraft to perform police activities at a lower operating cost than that of a helicopter fleet, as UASs become progressively smaller, cheaper, and simpler to operate. The public image of "drones" is generally that of large models such as the Predator or Global Hawk used in military operations. But UASs now manufactured for public agency use are small, multi-rotor aircraft that have dimensions in inches or a few feet, can hover like a helicopter, and weigh only a few pounds.

This chapter evaluates the feasibility of partially or fully replacing the LAPD helicopter fleet with

unmanned aircraft. We also consider using UASs to perform functions outside the ASD mission, including deployment by special units, patrol vehicles, or police stations. In this report, we address the major advantages and disadvantages of UASs compared to helicopters, other UAS mission applications, parameters of UAS flight under current FAA regulations, relative costs of manned and unmanned aircraft operation. We also consider possible organizational arrangements for UAS deployment, timing of UAS adoption, and public acceptance of unmanned aircraft used by local law enforcement.

PARTIAL REPLACEMENT AT THE MARGIN

One strategy for partially replacing helicopter operations with unmanned aircraft is to operate UASs for two to three hours a day in order to decrease helicopter flight time, while also acquiring practical knowledge of UASs. Unmanned aircraft could either be deployed in high-crime areas for a force multiplying effect, or in low-crime areas where helicopter responses are less frequent. UASs could also be used to replace helicopter patrol shifts partially during low-crime hours, to replace the third helicopter during high-crime hours, or to fly during the early morning hours when ASD helicopters do not fly at all (Smith 2011).

COMPLETE REPLACEMENT

Another potential strategy is to completely replace ASD's current operations with unmanned systems. Whether this initiative takes place immediately or unfolds slowly, it would entail purchasing a large number of FAA-approved unmanned aircraft and deploying them from strategic points around the City of Los Angeles. Complete regime change of airborne operations would also incur additional training and administrative costs.

A practical model of deployment might be to distribute a few UASs to each of the city's 21 police stations, and use the aircraft to provide localized aerial surveillance for each patrol area. The number of UASs given to each station could depend on the types of crimes committed in the district, the population density of the area, and/or the size of the patrol sector. Given the flight range and speed of most unmanned aircraft, between 20-40 UASs would be needed to match the response time of ASD's helicopters.

ASD MISSION PROFILE

ASD flies fourteen American Eurocopter AS350B2 A-Stars, five Bell 206B Jet Rangers, and one fixed-wing aircraft. The ASD mission is divided into Special Flights Section (SFS) and Air Support to Regular Operations (ASTRO). SFS activities generally include highly sensitive internal and external investigations that require advanced imaging technology, with which only two helicopters are outfitted (Smith 2011). Due to the lower percentage of SFS operations and current regulatory constraints addressed later in this report, we focus primarily on using unmanned aircraft for the ASTRO mission.

ASTRO is characterized by helicopters responding to a variety of radio calls during general patrol, and comprises roughly 80% of ASD's total flight time (Smith 2011). During ASTRO operations, helicopters perform a number of functions, most of which include providing aerial assistance to ground units, surveying

areas for criminal activity, engaging in vehicle and foot pursuits, locating suspects through Forward-Looking Infrared (FLIR), detecting LoJack signals, and providing support to special LAPD units (ASTRO 2010). General patrol is also used to deter illicit activity in notorious high-crime areas. ASD's time breakdown is positively correlated with the rate of violent crime in each neighborhood.

UAS MISSION PROFILE

Unmanned aircraft may be advantageous for a wide range of police activities. Like helicopters, UASs can be outfitted with high-tech imaging equipment such as FLIR and High-Definition video cameras. Small unmanned aircraft can also transmit live streaming video and encrypted communications to a ground operator. Even fully equipped UASs can be very small, quiet, and easy to operate. Although there are limited data on the operational effectiveness of UASs for *specific* missions, the size and stealth of UASs make them more suitable for certain police applications than for others.

Although no police agency currently flies UASs routinely, unmanned aircraft have been used successfully in a few live police actions. In 2010, the London Metropolitan Police used a UAS to track down two suspects fleeing on foot by relying on the aircraft's thermal imaging and on-board camera (Hull 2010). Earlier this year, the Texas Department of Public Safety successfully flew a small UAS in support of a Special Weapons and Tactics (SWAT) team raid to eliminate the risk of helicopter-targeted shootings (Finn 2011). UASs were also used to patrol low altitudes over Super Bowl XLV in Arlington, Texas and to help ensure the safety of more than 100,000 people (Kalthoff 2011). The Miami Police Department (MPD), Houston Police Department (HPD), and Mesa County, Colorado Sheriff's Department have also conducted authorized UAS flights, and still others are in various planning stages. As of December 2010, 273 authorizations had been issued to 95 public agencies for 72 different types of unmanned aircraft (Duquette and Dorr 2010).

AIRCRAFT COMPARATIVE ADVANTAGES AND DISADVANTAGES

Range: Both the A-Star and Jet Ranger have a flight range that far exceeds the LAPD patrol area. The most advanced UAS models that could be approved by the FAA for flight within Los Angeles have a command and control range of up to six miles, or an area of roughly 113 square miles. Also, depending on the operation, the FAA may require unmanned systems to be observed by a spotter. The limited range and spotter requirements of small UASs make general patrol at an extended range improbable.

Flight Time: The maximum flight time of the A-Star and the Jet Ranger is between three and four-and-a-half hours. Most small, electrically powered UASs have limited flight times in the range of 20-60 minutes, depending on payload. However, since most UAS batteries can be swapped in a few seconds, flight time is only minimally interrupted.

Speed: The top speeds of the A-Star and the Jet Ranger (roughly 178 mph and 150 mph, respectively) far exceed that of FAA-approved UAS models. The fastest small UAS travels at a maximum of roughly 60 mph. Their limited speeds make UASs unsuitable for vehicle chases until this FAA constraint is relaxed and other models can be approved. However, the UAS market is growing, and could be expected to produce models

capable of speeds in the 80-90 mph range in the future. At those speeds, UASs become much more effective for vehicle pursuits.

Noise Level: Helicopter noise levels can be problematic in three regards: 1) they can produce citywide noise complaints against the Department, 2) Los Angeles contains designated noise-sensitive areas, and 3) the rotor wash of a helicopter can sometimes make clandestine surveillance difficult with the exception of the two SFS aircraft. However, it is also conceivable that some amount of criminal activity is deterred as a result of seeing and hearing a police helicopter overhead.

Both electric and gas-powered UASs emit roughly 50-70 decibels (dB) at zero range, whereas helicopter noise can reach over 100 dB flying 100 feet overhead (Blair 2011; Purdue 2000). UASs might have a minimal criminal deterrent effect, only insofar as the vehicles can be seen above. On the other hand, the notion that the police might be quietly observing with unmanned aircraft could, in the long run, also be an effective deterrent. Ultimately, the quieter flight of UASs makes them more conducive to low-altitude missions (clandestine surveillance, etc.), and could also reduce the number of noise complaints against ASD.

Operating Altitude: UASs, like helicopters, can operate at altitudes up to several thousand feet, higher than LAPD generally needs to go (with the exception of certain SFS missions). UASs have great operational advantages at low altitudes; they can hover a few feet above the ground, while safety concerns bar ASD's helicopters from hovering lower than 300-400 feet (Smith 2011). Small UASs can also fly where helicopters cannot, such as below tree lines and even inside structures and buildings if necessary.

Inclement weather capabilities: Like helicopters, UASs are capable of operating in inclement weather. Even small UAS models can maintain flight control in high winds and rain that might suspend ASD's flight operations. Severe windy or stormy weather may adversely affect UAS battery life, though the data are not available on this aspect of their use. In addition, cloud cover is problematic for both helicopter and unmanned aircraft imaging capabilities and there is risk in flying either type of aircraft in severe weather.

Operating costs: Maintenance, personnel, fuel, and other administrative costs make helicopters very expensive to operate. We estimate the capital operating cost of a single ASD helicopter to be approximately $1,000 per flight hour. Unlike helicopters, UAS flight incurs minimal fuel and maintenance costs. Since different UAS models have hourly operating costs of roughly $100-$400, it is likely that at the margin a few UASs may be able do what helicopters do for a fraction of the cost.

Pilot and Tactical Flight Officer (TFO) element: Small UASs used for police purposes can be flown without sacrificing much in the way of imaging capability or reaction time. However, the "human factor" involved in helicopter patrol should not be overlooked; whereas TFOs have direct line-of-sight to the ground, UASs may experience poor image quality or lose video feeds altogether. Because UAS operators either view two-dimensional video monitors or an aircraft at a distance, they also lack a TFO's ability to determine spatial distances.

Risk to aircraft / flight crew: UASs make for a smaller target at which criminals could shoot. In addition, they pose no risk of harm to a flight crew in the event of being targeted. A UAS may even have a superior ability to track an elusive active shooter through visually restrictive environments without risk to a flight crew. UASs could safely respond to incidents such as the 1997 North Hollywood bank robbery or the shootings at Columbine, Virginia Tech, and inside the Westroads Mall in Omaha.[2]

FAA REGULATORY ISSUES

Any law enforcement agency must obtain a Certificate of Authorization (COA) from the FAA for public UAS flight (Duquette and Dorr 2010). COAs are only issued to public agencies and authorize the use of UASs only for professional, non-recreational purposes. Since the FAA has not yet established any nationwide standard for COA approval through local field offices, applications are expected to be processed through FAA headquarters in Washington, D.C. (McDuffee 2011).

In order to obtain a COA, a public agency must first apply for an Experimental Certificate of Authorization (ECOA) and demonstrate the ability to fly and maintain control of the specific UAS model in an open-area test flight. Once airworthiness has been proven in an experimental setting, the agency may apply for a COA for real-time police operations. COAs may approve UAS flight for a specific geographic location, time, day, altitude, or any combination thereof (Davis 2008).

If a COA is granted, the FAA will notify the appropriate Air Traffic Control (ATC) center regarding the details of the UAS's authorized operation. The application can take anywhere from an hour to several days to be approved. Because helicopters have already established airworthiness with the FAA, they are not subject to the same approval process.

The only exemption from this process would be in the event of a major catastrophe, in which case the FAA's national security exception can suspend the COA requirement. Otherwise, the FAA can put stringent limitations on flying UASs over crowds or densely populated urban areas. Most COAs that have been granted thus far only authorize UAS flight in short-term, confined-area operations. However, a few public agencies have recently been awarded extended-duration COAs. The Mesa County, Colorado Sheriff's Department recently received a one-year-long COA that enables it to fly UASs for life-saving operations during that one-year period without submitting repeated applications (McDuffee 2011).

IMPACT OF COA RESTRICTIONS

COA restrictions have significant implications for thinking about replacement strategies. Since COAs are almost entirely granted for localized, short-term flight, and can also restrict UAS flight over densely populated areas, regulatory measures are much more conducive to a partial replacement strategy. As these FAA regulations are readdressed (and possibly relaxed) in the future, investing in an extensive UAS fleet to patrol the city may become more realistic.

At this writing, FAA approval for a full replacement scenario is highly unlikely. But it may be possible to partially replace helicopters at the margin immediately, if COAs can be granted for patrolling areas that are less densely populated. The most likely areas for partial implementation would be those in the northwest sector of the city, which are relatively less densely populated, yet have high rates of property crime.

Besides obtaining a COA, UAS operation also currently requires one operator if visual line of sight to the aircraft can be maintained (heads-up flight), and also a trained observer if the pilot must fly the aircraft by viewing the monitor screen (heads-down flight). The FAA currently requires UAS operators to have FAA pilot licenses and flight medical clearances, although a simpler UAS operator's license may soon be established (McDuffee 2011). This UAS operator's

license would likely decrease the training costs for UAS flight and reduce the barriers to becoming an operator.

IMMEDIATE REPLACEMENT IS CURRENTLY UNREALISTIC

These personnel requirements also have implications for immediate replacement strategies. A sweeping replacement is unrealistic in the short term if the ASTRO mission is to be maintained, and the FAA requires personnel to have visual line-of-sight on UASs. Maintaining line-of-sight would reduce flight ranges, and consequently increase the number of UASs required to patrol the entire city. UASs may soon be outfitted with electronic sense-and-avoid equipment, which might eliminate the line-of-sight requirement. This advance would require employing a large force of FAA-licensed pilots and trained observers across the City, however, at a very high cost to the department. Nonetheless, partial replacement in the short term may be economically feasible if UASs are only used to patrol small areas. Additionally, FAA licensing does not prohibit other LAPD units outside of ASD from flying UASs, as addressed in a subsequent section of this report.

RELATIVE COSTS

To date, very little data are available regarding the relative capital costs of UASs versus helicopters. Because ASD helicopters respond to radio calls from their patrol positions in the air rather than from ASD headquarters, assessing the true monetary cost of providing air support for a given operation presents an empirical challenge. We use cost per flight hour as the unit of analysis by which to compare UAS and helicopter capital costs of operation.[3]

ASD Fleet: Over the past seven years, the annual maintenance cost of ASD's fleet of A-Stars and Jet Rangers has been approximately $4.8 million.[4] Dividing ASD's total maintenance costs for the past seven years by an average yearly flight time of 17,000 hours results in a maintenance cost of approximately $280 per flight hour (LAPD, ASD 2011).

In fiscal year 2008-09, the ASD fleet consumed a total of 550,000 gallons of fuel at a cost of $1.5 million (approximately $2.73 per gallon).[5] Dividing the total fuel cost of $1.5 million by a yearly flight time of 17,000 hours results in an average fuel cost of roughly $90 per flight hour.[6]

ASD estimates that the average hourly wage for a two-person flight crew is approximately $200 including benefits. This amount is the hourly cost of actually having the flight crew in the aircraft. However, since flight crews only fly for five hours out of a 10-hour shift, the actual cost per hour of flight for a two-person flight crew is twice that amount, or $400. That is, for every hour the flight crew is in the helicopter, they are also paid for one hour of work at ASD headquarters (LAPD, ASD 2011).

The final completion price of a fully-equipped Jet Ranger is approximately $2.6 million; that figure is roughly $3 million for an A-Star. These prices are about $4.2 million and $4.9 million once adjusted for amortization.[7] The projected lifespan of both aircraft is approximately 10 years or 15,000 flight hours, although ASD currently has several aircraft that have exceeded this mark due to budgetary constraints (Smith 2011). If two-thirds of the initial capital investment on both aircraft is recouped at the end of their lifespan, Jet Rangers and A-Stars can be traded in for approximately $1 million and $1.2 million,

respectively, using a discount value of 5%.[8] Dividing the non-recoverable cost of each aircraft by a total lifetime of 15,000 flight hours results in a depreciation of roughly $240 per flight hour for the entire helicopter fleet.[9] Adding maintenance, fuel, personnel, and depreciation costs per flight hour results in a total operating cost of approximately $1,000 per hour of flight time.[10]

Low-end UAS models: UAS operation includes minimal maintenance costs, operator and observer salaries, and a minor cost of depreciation. A low-end UAS manufactured for police use costs roughly $30,000 to purchase fully-equipped. These types of UASs require in-house maintenance at intervals of 100 flight hours at an estimated cost of $100 per session, though this figure is intentionally overstated. Relatively low-priced UASs are projected to last three to five years, after which point they may require $500 to $2,000 in replacement parts (Aeryon Labs 2011; DraganFly Inc 2011).

In order to ensure the cost of maintenance per flight hour is not understated, we offer a conservative estimate of 2,000 flight hours over a 3-year period (less than 2 hours of flight per day), during which $2,000 in parts will need to be purchased.[11] This estimate results in less than $2/flight hour in total maintenance costs. Because UASs are not routinely used by any police department, precise wages for a UAS flight crew are undefined. However, if UAS operators and observers earned a salary comparable to entry-level LAPD officers ($50,000/year with benefits), the average cost for a two-person flight crew would be approximately $50 per hour. Using the same salary structure as helicopter flight crews would double the cost of UAS operators and observers to $100 per flight hour.[12]

Adjusted for amortization, the price of a low-end UAS police model is roughly $35,000. Assuming a conservative lifespan of 2,000 flight hours over a 3-year period results in an approximate depreciation cost of $18/flight hour. Adding maintenance, personnel, and depreciation costs per flight hour results in *a total operating cost of approximately $120 per hour of flight time for low-end UAS models.*

Medium-priced UAS models: Medium-priced, fully-equipped UAS models can be purchased for roughly $300,000. The projected lifespan for these types of UASs ranges from 5 to 10 years, during which replacement parts may need to be purchased. These parts are estimated to range from $5,000 to $20,000. Roughly $100 for periodic maintenance will be required for every 100 hours of flight. Conservatively assuming a lifespan of 5,500 hours (3 hours/day) and a replacement part cost of $20,000 over a 5-year period results in a total maintenance cost of less than $5 per hour of flight.

Adjusting for amortization and assuming a conservative lifespan of 5,500 flight hours over a 5-year period results in an approximate depreciation cost of $70/flight hour. Adding maintenance and depreciation costs to a personnel cost of $100/flight hour results in a *total operating cost of roughly $175 per hour of flight for medium-priced UAS models.*

High-end UAS models: The most expensive small UAS police model can be purchased for roughly $3 million. We project routine maintenance for this model to be approximately $1,000 for every 100 hours of flight, although this figure is likely overstated. High-end UAS models have an estimated lifespan of 10 to 15 years. Assuming a conservative lifespan of 10 years of flying less than 5 hours per day results in a total lifespan of 18,000 flight hours.[13] Conservatively estimating replacement parts to cost $200,000 over 10 years results in a total maintenance cost of roughly $20/flight hour, adjusted for present value.[14]

High-end UAS models can fly nonstop for more than 24 hours, consuming about 1.5 gallons of fuel. In

18,000 flight hours, 1,125 gallons of fuel are consumed (110 gallons/year) at a total cost of $3,000 over a 10-year period (using ASD's price of $2.73/gal). Dividing total fuel cost by total flight hours results in a negligible fuel cost of less than $0.25 per flight hour.

Adjusted for amortization, the price of a high-end police model is roughly $4.9 million after 10 years. Assuming a conservative lifespan of 18,000 flight hours over a 10-year period results in an approximate depreciation cost of $270/flight hour. Adding maintenance and depreciation costs to a flight crew salary of $100/flight hour results in a *total operating cost of approximately $400 per hour of flight for high-end UAS models.*

Analysis: UASs can be an inexpensive alternative to helicopters due to their small maintenance and depreciation costs per hour of flight. Significant cost savings could be captured by using UASs for localized operations in lieu of a helicopter and reducing ASD's flight time by one or more shifts a day. Replacing one hour of helicopter use with three medium-priced UASs would result in an estimated cost savings of $500/flight hour and could patrol an area of roughly 340 square miles. Replacing one helicopter flight hour with one high-end UAS would save about $600/flight hour, though initial capital costs of purchasing the aircraft would be substantial. Even using conservative estimates for UAS maintenance, personnel, and depreciation costs, the projected cost savings from replacing one helicopter hour with three medium-priced UASs or one high-end UAS is significant.

A rough estimate suggests that three to six hours of UAS flight could be purchased for one hour of helicopter use. However, replacing two helicopters with 21 UASs (one deployed from each police station) would be more costly per hour of flight, even disregarding initial capital costs. As a result, partial replacement of helicopter hours at the margin, as opposed to full replacement, seems worthy of serious consideration from a cost-saving standpoint.

OTHER UAS APPLICATIONS

UASs can also be implemented in special LAPD units outside of ASD and deployed from individual police stations or patrol cars. Unmanned aircraft may be used for alternative missions such as patrolling city parks, monitoring traffic accidents, or responding to disasters. In addition, small UASs can do some things that helicopters cannot, and may also be able to perform other functions more effectively.

Some of these activities may best be performed as part of other LAPD units' operations, rather than under the auspices of ASD. The LAPD may choose to maintain ASD's general patrol function, but also deploy UASs for specific missions in which unmanned aircraft have a distinct advantage. These include low-altitude missions (below 300-400ft), clandestine surveillance, indoor flight, and operations in designated noise-sensitive areas. As a result, units such as Special Weapons and Tactics (SWAT), the Gang and Narcotics Division (GND), and the Counter-Terrorism and Special Operations Bureau (CTSOB) might represent the best platforms for UAS ownership within the LAPD. UAS models currently manufactured for public agency use may be better suited for these special missions rather than ASTRO general patrol.

Deployment by Individual Station: Individual stations may be used as launch platforms and operational hubs for UAS deployment. If a UAS were positioned at each of the 21 LAPD stations and pre-configured for rapid launch, UASs could meet or exceed the response time of ASD's helicopter fleet. Assuming an average top speed of 40 mph, a UAS could reach the farthest

boundary of its precinct within approximately four minutes (once launched).[15] By comparison, averaging the routine operating speeds of the A-Star and Jet Ranger puts ASD's response time between three and four minutes anywhere within the city, if one aircraft is patrolling on either side of the I-10 freeway.[16] Because patrol sectors vary in size, between 20-40 UASs would be needed in order to make UAS response time comparable to that of LAPD helicopters.

Deployment by Patrol Car: Small UASs deployed from patrol vehicles could expand a ground officer's capabilities in general. But they would be most useful in pursuing a suspect on foot. Some UASs can travel in a launch-ready configuration if placed in patrol vehicles. This capability could also fill perhaps the largest deficiency of the helicopter fleet—the inability to quickly deploy an aircraft that hovers at very low altitudes, travels indoors, or simultaneously moves quickly and sees below tree lines or infrastructure. However, current FAA pilot licensing requirements make this option largely impractical.

Potential for UASs in Non-LAPD Organizations: UASs can also be implemented through partner police organizations and unsworn personnel (non-law enforcement). This step could bypass regulatory hurdles restricting UAS flight by the LAPD and allow the department to outsource unmanned aircraft experimentation. However, use of unmanned systems by the private sector for commercial purposes is currently prohibited by the FAA; COAs cannot be granted to private companies or organizations (Davis 2008). As a result, it will be difficult to outsource the implementation of UASs to private entities. However, the case for a large company, neighborhood watch, or business district flying small, store-bought UASs does seem to be an efficient alternative to police use.

Within the law enforcement community, one policy alternative is to promote and support partner police organizations flying small, inexpensive UASs. This could potentially expand the security net provided by aerial surveillance at little or no cost to the LAPD. Considering the extremely low cost and growing technological capacities of recreational UAS models, the LAPD could contribute a few of these aircraft to worthy users at an insignificant cost to the department.

For example, the LAPD could encourage university police departments to assist them in paving the way for routine UAS flight. Most campus police departments patrol a small geographic area with relatively low crime rates, making for a more subtle UAS testing ground. Some campuses would likely benefit from this initiative more than others. For example, campuses in high crime areas would probably be better served by UAS flight. Even at lower-crime campuses, UASs equipped with cameras and audio speakers might easily replace some campus late-night security measures.

INEXPENSIVE MODELS AND UNSWORN PERSONNEL

One final consideration should be addressed outside of the LAPD: a UAS trial may not necessarily require purchasing expensive models specifically manufactured for use by public agencies. The technical differences between these aircraft and inexpensive remote-control aircraft have been steadily decreasing. In fact, some UASs intended for police use are manufactured by companies that specialize in recreational products. Currently, a small, four-rotor aircraft featuring live streaming HD video from two onboard cameras is available at a well-known chain retailer for $299 (Brookstone 2011). While this popular model lacks the speed and range of more expensive models, it may be suitable

for a few police applications. For example, small, inexpensive unmanned aircraft, operated by unsworn personnel, could greatly extend the capacity of the "cop on the beat" to be aware of trouble as it starts.

TIMING OF UAS ADOPTION

One of the most important considerations for the LAPD regarding UASs is timing: how much to do and how quickly to do it. The agency has the choice to be a headfirst pioneer, fast follower, or cautious follower in using UASs for policing. We analyze the choices below.

FAST FOLLOWER IS THE PREFERRED APPROACH

For a partial replacement strategy, it seems best that the LAPD be a fast follower. In the medium term, substitution at the margin within ASD might be the most practical approach. Partially replacing helicopter shifts with UASs during either low-crime hours or in low-crime neighborhoods (or both) would allow helicopters to target activities and locations where their deterrent value is highest.[17] However, one particular characteristic of Los Angeles creates a dilemma for this strategy: Although the city's areas with the highest violent crime rate are smaller and therefore more geographically suitable for UAS flight, helicopters are most effective in these areas. Therefore, a partial replacement strategy might best be implemented in neighborhoods with higher property crime rates.

On the other hand, the LAPD might best be served by equipping each individual station with a UAS for just over half the completed price of its next helicopter.[18] The next time ASD is due to purchase a new aircraft, a UAS model at $80,000 could be purchased for each of the 21 stations for a total of $1.7 million, or just over half of the cost of one new, fully configured A-Star. Although the additional cost of stationing FAA-licensed pilots at each station must be considered, this could simultaneously maintain the ASD mission and develop a robust UAS fleet. These are only a few examples of how LAPD could substitute UASs for helicopters at the margin for a reasonable cost.

DRAWBACKS OF FULL REPLACEMENT

A complete replacement strategy in the short term would entail a full commitment to current UAS technology that may soon be out of date. Thus, if followed, this approach would require that the LAPD be a cautious follower for a widespread implementation. Significant changes in the regulatory framework currently governing UAS operations may soon alter the entire mission profile of unmanned flight. Because full replacement in the short term does not leave room for advances in UAS technology—or for changes in FAA flight standards as proposed in the next five to ten years—there is cause to be wary of a sweeping UAS implementation.

Full replacement of the helicopter fleet is a long-term question that is guided by the uncertainty of FAA regulations in the next decade, the budgetary constraints of the LAPD, the hourly cost of UAS flight, and the plausibility of ever completely replacing ASD personnel with unmanned aircraft. When the FAA approves long-range, extended duration UAS flight for densely populated areas, the paradigm for police aviation may shift significantly. If UAS models with these capabilities prove to be a cost-effective substitute for the general patrol function, the composition of ASD

aircraft may change as well. It is foreseeable that with a large UAS commitment by the LAPD, the ASTRO patrol function of ASD could be somewhat supplanted by long-range, high-altitude, more sophisticated UASs within a decade. However, we contend that completely replacing an LAPD flight crew's experience in police aviation with UASs is largely unrealistic in the foreseeable future, even with well-trained UAS operators and an institutional proficiency in UAS operations.

Nevertheless, investing in UASs on a limited scale now would be highly valuable in building operational and institutional knowledge. This approach would entail purchasing a few UASs for special units outside of ASD, but could also be done by encouraging non-LAPD organizations to fly inexpensive unmanned aircraft. Such a short-term policy would produce the long-term benefit of establishing a working relationship between the LAPD, its partner police organizations, and the FAA in Los Angeles. That partnership will be critical when the time comes for a possible future widespread implementation of unmanned aircraft. Once departmental oversight of UASs can be transferred to ASD, divisions such as SWAT, CTSOB, or even patrol vehicles might have already demonstrated trustworthiness to the local FAA branch. Such a demonstration would likely go a long way towards making any future COA application process much easier to navigate for ASD.

PUBLIC ACCEPTANCE

Several police agencies in the United States have conducted FAA-sanctioned test flights of various UAS technologies. In the aftermath of Hurricane Rita, Houston city leadership searched for an enhanced means of assessing damage and compiling evacuation data (McDuffee 2011). The Houston Police Department (HPD) received FAA authorization to test-fly a highly sophisticated, military-contracted UAS model. However, much of this was done in relative secrecy. When Houston media outlets uncovered the nature of the technology being tested, HPD's test aircraft was painted as a potentially malignant "spy drone," and the project was consequently abandoned (Dean 2007).

The implementation of UASs by the LAPD is likely to meet a significant level of opposition from certain segments of the public, whose concerns are largely based on personal privacy invasion. As demonstrated by the Houston experience, a point of contention will be that the unique technological capabilities of unmanned aircraft create a potential for UASs to be used for surveillance without probable cause or reasonable suspicion. Therefore, we recommend that the LAPD engage in a proactive public relations campaign to reframe the issue. It will be critical to emphasize the vastly diminishing technical differences between recreational aircraft and modern law enforcement UASs. Furthermore, the imaging capabilities of recreational models and police helicopters are becoming increasingly comparable.

Although the following five factors might not be of immediate concern to the public, emphasizing their importance could garner more public support for UAS flight by police. These points could easily be conveyed through the LAPD's monthly meetings with neighborhood councils.

1. UASs can do what helicopters do for a fraction of the cost. The cost savings could be even greater as technology improves and FAA regulations relax. Given the city's fiscal constraints, initiatives that save taxpayer dollars should be framed as publicly beneficial.

2. Many UAS models within the FAA's regulatory parameters are electrically powered, and thus significantly quieter than any helicopter. UAS operation would reduce unwanted helicopter noise, which would be especially

valuable to residents who live in designated noise-sensitive areas.

3. UAS models for police expend either very little fuel or none at all, as opposed to round-the-clock fuel consumption by helicopters. While this difference in fuel consumption may not have a significant environmental impact, it might have a small effect on public attitudes towards police aviation.

4. Compared to helicopters, small UASs represent a decreased risk to the general public in the event of a loss of flight control. Although no data exist yet on small UAS accident rates, their small size and light weight will translate to minimal collateral damage on the ground in the event of a crash.

5. UAS flight could enable liberty-enhancing policy changes such as extending park hours at night, allowing citizens to feel safer in otherwise potentially dangerous conditions.

Two final public issues concerning the deployment of UASs should also be addressed. First, as unmanned aircraft have evolved, they have also undergone a significant demilitarization in terminology, changing from drone, to UAV, to most recently, UAS. In order to make their use by local law enforcement more palatable to the public, we recommend that the LAPD continue this trend by simply referring to unmanned systems as *remote-control (R/C) aircraft*.

Second, it will be critical that a trial implementation proceed with public transparency. The Houston experience suggests that the LAPD offer media representatives, city leadership, and groups such as the American Civil Liberties Union (ACLU) the opportunity to be directly involved in every step of the implementation process. Meaningful inclusion could allay citizens' concerns over civil liberty violations, and preempt any negative misrepresentation of UASs used for policing Los Angeles. This strategy might best be initiated by forming focus groups with representatives from these organizations and neighborhood councils. Instead of trying to force-feed a new technology to the public, the LAPD could simply ask. Having an endorsement, or at least acquiescence, from these groups would be valuable in establishing police UASs as publicly benign.

As a long-term strategy, identifying and setting agency-wide rules regarding usage of unmanned systems would both 1) provide officer guidance in uncertain situations, and 2) demonstrate to the ACLU a strict standard for operating in full compliance with Fourth Amendment provisions for law enforcement officers. Having a comprehensive agency policy might also allow the LAPD to track long-term data, such as safety records, mission frequencies, public complaints, and operational successes that would be valuable in addressing the regulatory environment in the future.

CONCLUSION

The extent to which UASs are a practical alternative to manned aircraft, and whether they might provide exclusive capabilities, depends on technology, FAA regulations, and public acceptance. Right now, the unique capabilities of UASs relative to the helicopter fleet make unmanned aircraft advantageous for *certain* applications. As FAA regulations loosen and technology improves, UASs have the potential to save money by replacing marginal hours of helicopter operation.

Since most COAs are targeted for highly localized, short-term police missions, and Los Angeles is a densely populated area, UAS *patrol* within ASD in the near future is highly improbable. Therefore, it is uncertain that UAS flight can adequately replace the functions of ASD in full. However, this is not to say UASs do not belong inside of ASD in the future, since

there is also potential for UAS patrol as outlined in Sections II and III. An incremental phase-in of UASs into the ASTRO mission by station deployment could be a practical implementation strategy in the medium-term.

For an agency as large and operationally diverse as the LAPD, UAS applications are almost limitless outside of the context of routine air support. Investing in UAS technology now can keep the LAPD at the forefront of police aviation, even if the initiative is small in scale, incremental, and outside of ASD. This is where the LAPD can retain its role as a pioneer. Using UASs within special units is operationally achievable, tactically advantageous, and approvable by the FAA immediately. Until citywide patrol by UASs is authorized by the FAA, these special missions represent the most feasible avenues for UAS implementation.

APPENDIX A: ACRONYMS USED IN THIS CHAPTER

A-STAR = American Eurocopter AS350B2 Helicopter, one of two helicopter models flown by the Los Angeles Police Department

ACLU = American Civil Liberties Union

ASD = Air Support Division of the LAPD

ASTRO = Air Support to Regular Operations, one of ASD's two mission categories

ATC = Air Traffic Control

COA = Certificate of Authorization, the current form of FAA approval for flight of Unmanned Aerial Systems by public agencies

CTSOB = Counter-Terrorism and Special Operations Bureau of the LAPD

ECOA = Experimental Certificate of Authorization, obtained prior to a COA

FAA = Federal Aviation Administration, the governing body of the National Airspace System of the United States

FLIR = Forward Looking Infrared (Radar), a low-light imaging system

GND = Gang and Narcotics Division of the LAPD

HPD = Houston Police Department

LAPD = Los Angeles Police Department

MPD = Miami Police Department

NAS = National Airspace System of the United States

SFS = Special Flights Section of the LAPD's Air Support Division

SWAT = Special Weapons and Tactics teams

TFO = Tactical Flight Officer, member of an LAPD ASD Air Crew

UAS = Unmanned Aerial System

UAV = Unmanned Aerial Vehicle

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ENDNOTES

1 This chapter is based on an Applied Policy Project report developed for the Los Angeles Police Department by the authors as part of their Masters of Public Policy program. The original report preparation was supervised by Prof. Mark Kleiman of the UCLA School of Public Affairs, Department of Public Policy.

2 In the North Hollywood bank robbery, two heavily-armed robbers engaged in a shootout with police and were killed. Police and others were injured. In 1999, two students at Columbine High School killed other students and a teacher, injured others, and committed suicide. In 2009, a single gunman killed 32 students and committed suicide at Virginia Polytechnic University (Virginia Tech). At the Westroads Mall, a man killed eight others in 2007 and then committed suicide.

3 This section compares the relative capital operating cost of helicopters and UASs per flight hour. ASD helicopter training costs roughly $250,000-$500,000 over a 4-6 month period. Based on our interviews with UAS manufacturers, UAS operator and observer training may range from $3,000-$10,000 and take from 1-2 weeks to complete. Though further analysis may be required, an initial estimate puts UAS training costs at less than 2% of what it costs ASD to train its helicopter pilots.

4 Approximately $250,000 per aircraft.

5 Roughly 29,000 gallons and $79,000 per aircraft.

6 Fuel consumption is not a major contributor to hourly flight costs. Even a 50% increase in fuel prices would be immaterial to total costs per hour.

7 All present value calculations use an interest rate of 5% hereafter.

8 The trade-in value for a 10-year old aircraft with 15,000 flight hours is roughly two-thirds of its initial price (Helicopters Magazine 2011).

9 Jet Rangers and A-Stars depreciate at roughly $210/flight hour and $250/flight hour, respectively. After weighting for the proportion of both aircraft within ASD, the fleet depreciates at roughly $240/flight hour.

10 $280 + $90 + $400 + $240 ≈ $1,000/flight hour, which excludes overhead, buildings, safety equipment, training, and costs of financing. ASD's true cost per hour of flight is double this on weekdays and triple on weekends, since ASD flies two aircraft during the week and three aircraft on Fridays and Saturdays.

11 Calculations assume that replacement parts are purchased after the first year. This assumption applies hereafter.

12 Although it is not clear that UAS operators and observers should be paid for hours not in flight, we use the salary structure of helicopter flight crews for consistency. Substituting for unsworn personnel with lower salaries could further reduce UAS operating costs per flight hour.

13 This assumed high-end UAS model is designed to fly continuously for up to 30 hours. We intentionally limit flight time to less than 5 hrs/day to ensure that maintenance costs are not underestimated. Even after overcompensating for uncertainty, maintenance costs account for only 5% of total operating cost per flight hour.

14 Although multiple spare parts are included in the purchase price of high-end UAS models, even conservatively estimating an additional $200,000 in maintenance after one year does not significantly raise maintenance costs per flight hour.

15 Using an average top speed of eight leading small UAS models (roughly 40 mph) and the farthest distance from a station to its boundary (Devonshire or Foothill).

16 130-170 mph for the A-Star and 125-155 mph for the Jet Ranger.

17 A study conducted by NASA's Jet Propulsion Laboratory determined that the sound of a helicopter deters crime in Los Angeles, as claimed on the official website of the LAPD Air Support Division.

18 The completion price of an A-Star is roughly $3 million. The confidential UAS model previously discussed (in footnote 7) costs roughly $80,000, and is capable of a flight time of several hours. Purchasing one of these aircraft for each of the 21 LAPD stations would amount to $1.7 million.

9

PUBLIC PENSION FUNDING:

THE UNIQUE CASE OF THE UNIVERSITY OF CALIFORNIA

SUSAN GALLICK

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There has been increasing concern about the funding of public pensions—state and local—in California and in other states.[1] In the fall of 2011, Governor Jerry Brown offered a proposal to modify all state and local pension plans, including the plan operated by the University of California.[2] Various groups have offered related or more far-reaching proposals for public pensions in the state, possibly to be placed on the ballot as early as 2012.

The pension plan of the University of California poses special problems because the state has refused to contribute to the funding of the plan. Since roughly two-thirds of the funding that comes to the plan derives from non-state sources—such as research grants and hospital charges—that cannot be charged more than the state portion, the UC pension plan and UC more generally face difficult circumstances. Each dollar not contributed to the UC pension by the state (or by someone on behalf of the state) causes a potential loss of $2 in non-state contributions which then become plan liabilities.

Recouping those lost contributions from non-state sources in the future is difficult, and particularly for federal contracts and grants, impossible. Since the Regents have no independent taxing authority, revenues needed to fund the pension system—if not provided by the State—ultimately must be taken from the funds the State does provide for core academic programs. The resulting budget squeeze—along with other cuts—leads to rising tuition, a kind of slow-moving, *de facto* privatization of UC, even if that is not the intent of State policy makers and elected officials.

The California Legislative Analyst's Office (LAO) has gone so far as to question the State's obligation to support UC's pension system.[3] It has claimed that some features of administration make that program different from other state-supported pension systems and thus exempt the state from any legal obligation to the UC pension. Given the State's refusal to contribute,

the UC-Regents both fund the Plan and have fiduciary responsibility for the Plan; most other public pension plans separate these functions. In their dual role, the Regents cannot neglect adequate pension funding. They have taken various steps to increase funding to the pension and to modify pension benefits for new hires to reduce costs. However, their responses could be overridden if the above-mentioned governor's proposal, or some other statewide pension policy, is adopted.

BACKGROUND

California's early public pension history is closely related to the State's involvement in basic public education. As early as 1904, the State supported retirement annuities for professors at what is now UC-Berkeley and UC-San Francisco. Several years later, in 1913, school and community college teachers gained coverage by the California State Teachers Retirement System or CalSTRS. State college (now CSU—the California State University) teachers had to wait for coverage until 1932 by the State Employees Retirement Plan, SERS, which later became the Public Employees Retirement Plan, PERS, now called CalPERS.

Historically, State of California public pension plans have been operated autonomously. Hundreds of public retirement plans were established according to the provisions set out in the California Government Code, in particular the section devoted to Public Employees Retirement Law (PERL), passed in 1937. The Code outlined all aspects of public pension plan administration, calling for an independent Board and annual independent audit and valuation. These devices were intended to provide protections for the State, which assumed public pension plan liability.

UC is directly referenced in California's public retirement pension law; the UC-Regents are required to follow certain procedures to ensure continued funding of its retirement plan. In almost every way, University of California Retirement Plan (UCRP) fits into the public retirement plan model for the State of California. It mirrors the requirements the State outlines for pension funding or change in funding, for benefit structure, and for plan maintenance in return for a continuing obligation on the part of the State to pay the employer retirement contribution on State-provided compensation.

UCRP is included in comprehensive studies on growing public pension liability in the State. On December 28, 2006, then-Governor Arnold Schwarzenegger established the Public Employee Post-Employment Benefits Commission (PEBC) to study problems of pension funding. The new Commission requested that the California Research Bureau (CRB) conduct a survey of all the State's public retirement systems in order to identify the total pension obligation and the amount that is unfunded. CRB researchers included CalPERS and UCRP, and the school plan, CalSTRS. They also made estimates for all public agency plans.

The CRB survey examined the current funding levels and employer contribution rates since 1990. In looking at financial data as of June 30, 2006—before the Great Recession—the researchers found that the State's retirement assets were $516 billion, including UCRP, but the liability was $579.5 billion, with $63.5 billion as an unfunded liability. The total funded ratio (funded liabilities/assets) was 89%. Since that time, other researchers have questioned the assumptions on future earnings and the discount rate used to estimate future plan liabilities.[4] When added to the adverse impact of the Great Recession on the portfolios held by the various pension funds, funded ratios as low as 55% have been estimated.

State politicians and legislators began to link the pension liability squeeze with reduced funding

for higher education. Governor Schwarzenegger, for example, said that skyrocketing public pension payment "is money that cannot go to our universities, our parks and other government functions. Now, for current employees these pensions cannot be changed—either legally or morally. We cannot break the promises we already made. It is a done deal." Ironically, connecting the State's mounting unfunded retirement liability and the plight of "our universities" compounds the problem the State has created for UC; the needs of the other state and public pension plans in California have pushed aside UC's claim to resumption of state support for UCRP.

SOME PENSION DEFINITIONS

Most basic public pension plans—including the UC plan—are of the "defined benefit" (DB) variety, sometime referred to as "traditional" pensions. Defined benefit plans are also found in private firms, particularly in the union sector, but have declined markedly in usage. More common in private employment are what are termed "defined contribution" (DC) plans of various types.

DB plans promise employees a monthly pension payment based on a formula typically involving age, length of service, and earnings history before retirement.[5] The employer thus takes on a liability to make the pension payments when they come due. A mix of employer and employee contributions goes into a trust fund, administered by a board. The board will hire actuaries to determine what the value of the liabilities are, a process that involves forecasts of future fund earnings, retirement behavior of employees, and life expectancy of retirees, among other factors.

Based on their estimates and assumptions, the actuaries will recommend a level of contributions (usually a mix of employer and employee contributions) that keeps the plan 100% funded, i.e., assets in the fund = liabilities of the fund. If it turns out that there are insufficient assets, the actuaries will recommend additional contributions to bring the liability/asset ratio back to 100% over some time period. If the ratio rises above 100%, they may recommend a contribution reduction or even a contribution "holiday," i.e., a period in which no contributions are made until the funded ratio falls back to 100%.

Pension actuaries have developed a concept known as the "normal cost" of a DB pension. Essentially, the normal cost is an estimate of the value of contributions needed to cover the added liability each year related to the employment of covered workers *that year*. If the normal cost is contributed to the pension fund, the added assets in the fund just equal the added liability. Thus, if the plan is 100% funded to start, and if the normal cost is received in contributions, the plan will remain 100% funded.

Under a DB plan, the employer effectively has assumed the risk of financing the eventual pension payments. If the value of the fund's portfolio declines, say, due to a stock market crash, subsequent contributions must rise. But retirees and eventual retirees will receive their pension payments based on the underlying formula regardless of what happens.

Private DB pensions are insured by an agency of the U.S. Department of Labor if their employer/sponsor goes bankrupt.[6] Public pension plans are not insured but the legal obligation of governmental employers to make *already-promised* pension payments has been regarded as ironclad as the quote above by Governor Schwarzenegger indicated. Thus, if the pension fund in the public sector runs down its assets, the governmental jurisdiction involved must still pay

pensions out of whatever tax and other sources of revenue it has.

Legal uncertainties, however, arise for public pension promises going forward. It is clear that the pensions of already-retired persons cannot be reduced. And it is clear that active employees cannot lose pension promises made up to the present. The issue is murkier when it comes to changing the formula for benefits to be earned in the future by current employees. There have been calls in California to make such formula changes and then test the matter in the courts.[7]

DC plans simply obligate the employer to put a given pension contribution (typically a percentage of pay) into an individual account of an employee. That ends the employer obligation. The employee is given various investment vehicles in which to place the accumulated contributions, perhaps a mutual stock fund, a bond fund, and a low-risk savings account type fund. Ups and downs in the financial markets will affect the value of assets in the individual accounts. The employee thus faces the risk that upon retirement age, he or she will not have sufficient funds for a comfortable or adequate standard of living.

DB and DC funds have different behavioral consequences. In particular, DB funds create a strong incentive to retire which DC funds do not. Each year that the DB-covered worker remains employed is one less year that he will receive a pension (since life is finite!). Remaining on the job involves a calculation of weighing another year of wages and whatever impact that has on raising the pension entitlement against the lost year of pension receipt. The lost year of pension receipt's value becomes larger and larger as the worker continues employment to the point that an employee may end up working for nothing by not retiring. In a DC plan, in contrast, the worker continues to add to his/her account year after year; there is no subtraction and hence there is no particular incentive to retire.

In occupations—such as university faculty—where renewal is important, i.e., where "new blood" is needed, having a retirement incentive is important. University faculty members have tenure so that forcing retirement for low productivity is difficult. And as in most occupations—public and private—a mandatory retirement age for faculty is illegal under federal labor law.[8]

Almost all private sector workers are covered by Social Security, which is essentially a DB plan. In contrast, some public workers are not eligible for Social Security in their current employment.[9] And some public workers who are not receiving Social Security coverage from their current employment may acquire some eligibility for Social Security from employment before or after their current jobs or from outside income.[10]

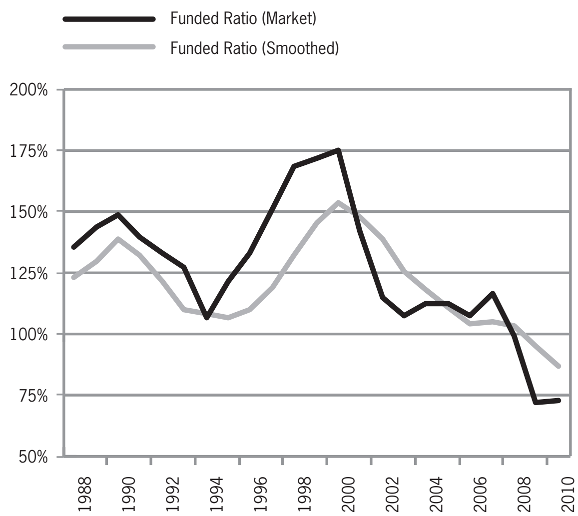
THE UC PENSION

The State of California has not contributed to the UC pension plan since 1990, when the plan became overfunded. Some part of the confusion on the part of the State in resuming contributions after the plan became underfunded in 2008 is therefore understandable. It had been so long since contributions were viewed as needed in the UC retirement plan—nearly two decades—that many officials, including those in the LAO, seemed to forget the past history of State funding.

In addition, given the University's size and scope—ten campuses, three Department of Energy labs that it co-manages, five Medical Centers, and research stations throughout California and in foreign nations—funding retirement contributions for all the active and inactive members under the UC plan would be a significant undertaking.[11] The funding cost in absolute terms is large even though roughly two thirds of the funds would come from non-state sources such a federal and other research grants, hospital revenues, and miscellaneous autonomous enterprises within UC.

As **Figure 1** shows, by the end of fiscal year 2009-10, the UC pension had a funded ratio below 75% on a market basis.[12] Yet a decade earlier, the ratio had stood at 175%. Clearly, the Great Recession and its effect on financial markets had a dramatic impact beginning in 2008. And the dot-com bust after 2000 also had a major impact as can be seen on the figure. But there is a more complex story than just the Great Recession or the dot-com bust. Thus, some background history is in order.

Figure 1: UCRP funded ratios



Note: Data points are as of June 30 of the year shown.
Source: Reproduced from http://www.ucop.edu/treasurer/invinfo/UCRP_GEP_Risk_Rpt_06-30-11.pdf

CALIFORNIA VOTERS DESIGNATE UC AS A "PUBLIC TRUST" IN 1879

UC is a unique institution—originally a land-grant university that combined American pragmatism with the heritage of the British undergraduate experience and with that of the German research institution. The result was formation of a new and wholly American hybrid of higher education. In its combined missions of teaching, research, and public service, UC was meant to contribute to society at all levels.

The history of the University of California goes back to 1849 when the first State constitution incorporated a vision of a public education system supported by the State for the good of all citizens. Gold was discovered in California in the same year that this image of a future university system began to take shape. A few years later the State took advantage of the federal Morrill Act of 1862, which established the land-grant college program.

Under this program, the federal government donated federal land to the states if they used it to create colleges. However, the giving of land for colleges was not accompanied by federal funding for operation. The need for funding occasionally resulted in land-grant colleges teetering on the brink of bankruptcy, yet located on prime state real estate. In short, states had to take the land donations from the federal government but then fund the colleges built upon them from state resources.

In 1868, the California Legislature passed the Organic Act, which provided the charter for California's only land-grant university. Signed by Governor H. H. Haight on March 23, 1868, Charter Day, the new Act created the University of California. One of the provisions of the Organic Act allowed the State to create a "corporation…which is 'The Regents of the University of California.'" The UC-Regents first began organizing in Oakland in 1869. But by 1873, the project had been moved to Berkeley and the first campus of the University of California was opened there. For many years thereafter, the University of California and what we now call UC-Berkeley were one and the same.

Governor Newton Booth spoke at the first commencement in 1873 to the 12 assembled graduates:

> *"[The University] is for use, not show; for everyday wear, not holiday attire…We want it not merely as a teacher and disseminator, but as a searcher after truth, an investigator, a discoverer. We want a University… for the people, in sympathy with their wants… showing by leadership and example that the educated man is not a member of a caste… but that his guild is humanity."*

Creating the University of California meant first creating the institution of a Board of Regents that would govern it in the manner of a corporation. However, the early Board faltered due to the interference and meddling of the state legislature in the workings of a university. The Regents knew that they needed independence in governance if they were to accomplish their mission to create a high quality university system. Independence could not be guaranteed by mere statute, which could be easily changed, but by the State constitution.

At just about this time, across the Bay, Stanford University began with a very different premise: a private university with enough private resources to govern itself as it wished without any promises to the State or the citizens. These two models of universities remain in California and throughout the world. However, to the extent that public universities have come to rely on tuition for more and more of their core operating expenses, the more they are *de facto* "privatized." Typically, that word is not used because of public sensitivity.[13] But the more a university depends heavily on tuition for its core academic programs, the closer it comes to the Stanford/ private model.

It was not until 1879 that UC's special status as a public trust took final shape. During that year the Regents attended the second State constitutional convention and lobbied for an amendment that would give the University of California constitutional autonomy from legislative control. They persuaded enough citizens that it was better to put their trust in the Regents than in the State legislature to manage an academic institution and keep it separate from politics, meddling, and corruption.

In May 1879, voters approved the new constitution that guaranteed the University of California a level of independence shared by few other public institutions in the nation and that gave its governing Board of Regents "full powers of organization and government," subject only to limited oversight by the legislature. (The relevant sections of the state constitution are found in Appendix A to this chapter.) Only five other major public university systems share the designation of a public trust, among them the University of Michigan, another of the highest-ranking public college systems in the country.[14]

UC AND THE STATE APPROPRIATIONS PROCESS

UC's autonomy from legislative control did not mean autonomy from the State appropriations process, which was controlled by the legislature and the governor:

ARTICLE 4, LEGISLATIVE, SEC. 12.

> (b) The Governor and the Governor-elect may require a state agency, officer, or employee to furnish whatever information is deemed necessary to prepare the budget.

While the legislative and executive branches allocate funds to the University, they do so with the knowledge that they cannot impair the ability of the Regents to govern the University through the allocation process. However, there is a fuzzy line between control via budgetary appropriation and direct administrative control. Moreover, in the specific case of pension contributions, even if the legislature does not have any specific goal in mind when it fails to provide the funding, that failure nonetheless affects the manner in which UC is forced to operate. As noted earlier, tuition increases to cover pension expenses amount to a *de facto* form of pressure towards UC privatization, even if that is not what the legislature and governor intend.

EVOLUTION OF STATE-SUPPORTED RETIREMENT PLANS AND THE COVERAGE OF HIGHER EDUCATION

The oldest public retirement plan in California is CalSTRS (California State Teachers Retirement System), created by law in 1913 (California Education Code, Title 1, Division 1, Part 13).[15] Originally, this plan offered retirement benefits to certificated public school teachers and community college instructors in the amount of $500 per year or roughly 50% of compensation. Funding came from the State in the amount of 5% of the annual revenue from inheritance taxes and from employee contributions. Since CalSTRS includes coverage of community colleges, it administers the retirement program of one of the three segments of California public higher education.

Currently, CalSTRS is governed by the Teachers' Retirement Law, California Government Code, Sections 22000-27413. The CalSTRS Retirement Board has 12 members, some appointed, some elected, some *ex officio* government officials. The Board has exclusive control over the investment and administration of the CalSTRS retirement fund. Apart from its basic pension program, CalSTRS administers other supplementary retirement saving and health programs.

CalSTRS' contribution policy divides its normal cost between employer and employee. As of 2011, the employee pays 8% of his or her covered compensation, and the employer, the employing school or community college district, contributes 8.25% of

covered compensation, for an estimated normal cost of 16.25%. State appropriations are supposed to cover any amount needed to meet funding requirements such as increases in the estimated normal cost and any accumulated unfunded liability.

The State is obligated by statute to make the appropriations to CalSTRS that are calculated by the plan actuary and that are approved by the Board. During the 2003 State budget crisis, the State withheld a $500 million payment to CalSTRS, after which the CalSTRS Board filed a lawsuit. The courts ruled against the State action, forcing payment of the $500 million to CalSTRS several years later plus lost interest. Unlike the Regents, therefore, the CalSTRS Board has the authority to force state contributions.

In 2011, CalSTRS was the third largest public pension plan in the nation and the second largest in the State, with over 850,000 total members (retirees and currently covered employees) and about 1,400 different local school district employers. As of October 31, 2011, CalSTRS had $148 billion in assets. It officially put its unfunded liability at over $50 billion.

THE CSU: SERS TO CALPERS

By the late 1920s, the legislature was interested in expanding retirement coverage to a larger base of state workers so as to include state college (now CSU) teachers and employees falling in the "safety" category—police officers and firefighters. Legislators believed that state sponsored retirement plans would actually save the State money by moving the salaries of older employees off the state budget for current operations and on to a retirement plan, allowing the hiring of younger employees at lower salaries. Also, pension plans that provide adequate retirement income were seen as keeping older, retired state employees off public assistance programs.[16]

However, if the State were to take on the obligation of sponsoring these long-term benefits, state government employers seeking state funds for retirement were to be mandated to adopt and follow sound actuarial funding principles. In 1927, the state created a Commission on Pensions of State Employees (Chapter 431, Statutes of 1927), which made several recommendations including the prefunding of pensions:

> An urgent responsibility rests upon the state to see that any retirement system, which it may sponsor, is placed upon a sound financial basis, where liabilities are provided for as they are incurred, rather than when they mature.

The Commission further explained the importance of adopting and following actuarially sound funding principles such as estimating the cost of the current service year (normal cost), the interest rate likely to be earned on fund investments, mortality rates, projected salary increases, etc. In the following year, 1930, California voters approved Proposition 5, which amended the State Constitution (Section 22a, Article IV) to allow pensions to be paid to all state workers with prefunding standards set forth in the proposition. In 1931, legislation (Government Code, Title 2, Division 5, Parts 3 and 5; and Article XVI, Section 17, California Constitution) was enacted to establish the State Employees Retirement System (SERS). By 1932, the new plan—now CalPERS—was in operation.

Among those workers it now covers are the employees of the California State University (CSU) system including faculty. Thus, CSU and UC are under two separate retirement programs. (And community colleges—as noted before—are under a third system.) In the current period, when the State allocates budgets between UC and CSU, the CSU budget implicitly comes with a pension contribution on top of the official allocation because CSU employees benefit from CalPERS.[17] In contrast, with the state presently making no contribution to UC's pension, the UC

budget from the state implicitly comes with an implicit subtraction: the funds diverted by the Regents to fund their pension system.

Under the State constitution, the CalPERS Board of Administration has sole and absolute authority and fiduciary responsibility for the investment and administration of PERF, the Public Employees' Retirement Fund. The Board has 13 members: six elected by members, three appointed, and four *ex-officio* members including the state treasurer and state controller. It has the authority to set contribution rates, based on an independent audit and actuarial valuation of the plan assets and liabilities. The State then can exercise its right to pay more, but not less, than the required contribution. As in the case of CalSTRS—but not in the case of the University of California—the state cannot forego its contribution to CalPERS.

The employee contribution rate was based originally on age at employment, but—after 1970—it was changed to a fixed percentage of pay, with the percentage established by statute, now 5% of covered compensation for most state miscellaneous employees. The employer contribution has fluctuated to fund the difference between promised pension benefits and the revenues generated by member contributions and investment earnings.

As noted, the State is obligated to pay the employer contribution to CalPERS to fund the retirement benefits of members in the plan. California State Government Code Title 3, Division 4, Section Part 3, Chapter 9, Sec. 20814 requires the State to include in the annual budget the funding of an amount to support the employer-paid retirement contribution rates established by the CalPERS actuary. It requires the legislature to adopt the contribution rates and authorize the appropriation in the Budget Act.

> 20814. (a) Notwithstanding any other provision of law, the state's contribution under this chapter shall be adjusted from time to time in the annual Budget Act according to the following method. As part of the proposed budget submitted pursuant to Section 12 of Article IV of the California Constitution, the Governor shall include the contribution rates submitted by the actuary of the liability for benefits on account of employees of the state. The Legislature shall adopt the actuary's contribution rates and authorize the appropriation in the Budget Act.
>
> (b) The employer contribution rates for all other public employers under this system shall be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in rate.

The State's obligation to pay full retirement contributions was tested in the early 1980s, when budget problems affected its ability to pay the retirement benefits requested by CalPERS. In 1983, the State did not give CalPERS its full contribution, an omission that forced the CalPERS Board of Trustees to take the State to court for non-payment of the full retirement contribution. In 1983, the California Court of Appeals held that the failure of the State to fund CalPERS at the actuarially-determined rate was unconstitutional. It ordered the State to make up the amounts that had been denied to CalPERS. The issue was later taken to the State Supreme Court, which refused to hear the appeal. Thus, the ruling of the lower court has stood.

CalPERS is the largest retirement system in the State and the nation, with over 1.6 million total members (active and retired) and about $235 billion in assets as of late summer 2011. It covers most State workers—except at UC—and many local employees.[18]

CalPERS actually administers various pension plans with different benefit formulas. As of 2011, it officially put the funded ratios for these plans in the 60-70%

range. However, CalPERS uses a very long-term averaging method which likely understates its future underfunding problems. As noted, CSU falls under CalPERS. But because CSU is part of a much larger program, and one in which court decisions have made clear must be funded by the State, the CSU Board of Trustees has been less involved in retirement issues than has been the UC Board of Regents.

THE CREATION OF UCRP

In the early 20th century, UC had developed its own retirement plan, but only for faculty members. In 1904, the UC plan provided for the purchase of commercial annuities equal to two-thirds salary for Berkeley and UC-San Francisco faculty aged 70 or older with 20 years of service.[19] The early system, therefore, did not have a full-fledged trust fund and oversight process. In 1924, the UC-Regents established the Pension and Retiring Annuities System (PRAS) for faculty and high-level administrators. PRAS had a Board of Trustees that arranged for an independent annual audit and an actuary to set the contribution rates.

In 1937, the Regents expanded pension coverage by including all non-academic employees in a plan administered by CalPERS. During World War II, UC became involved in the federal Manhattan Project that developed the atomic bomb. As a result, it inherited responsibility for administration of the nuclear labs. Employees who worked in the labs were also enrolled in the UC Plan administered by CalPERS.

1954–55

In 1951, the UC faculty, unhappy in PRAS, voted that it wanted to leave the existing UC retirement plan and join CalPERS, an action which drew the full attention of the Regents to retirement problems at UC. Faculty's unrest at that time was understandable. The cost of their contributions was rising, while the benefit level remained unacceptably low.

The activities of Professor Constantine Maria Panunzio, Anthropology and Sociology at UCLA, brought the plight of the UC faculty to the attention of the Regents. Upon his retirement in 1950, he discovered that he was to receive only $129 a month as a retirement annuity. The average income for emeriti was about $108 a month. Non-academic employees under CalPERS received more generous payments. Although Regental committees had been meeting for years to study the problem of faculty retirement at UC, nothing had happened. Panunzio's activism led to the reformulation of PRAS benefits in 1954.

The Regents paid careful attention to the State's interests before they made any changes to their university plan because the State ultimately had to provide funding. Before making their decision about what to do about pensions in 1954, the Regents hired the actuarial firm of Coates, Herfurth, and England to analyze the current financial condition of PRAS. It was upon the actuary's findings that the Special Committee of the Regents announced on March 8, 1954 its unanimous decision:

> "It is for the best interest of the University, its faculty and administrative officers, and the State of California, that the Regents take the necessary action to provide a pension system affording to its members substantially the same benefits as those afforded by the State Employees' Retirement System" with the exception "that such system shall not provide pensions or retiring allowances in excess of 80% of the average of the highest three years of salary."

Furthermore, the Special Committee advocated restructuring PRAS to offer benefits "at less expense to

the State of California and at no greater expense to the members" with limited exceptions.

However, the reformulated PRAS was not much different from the old PRAS: it was restricted to a small group of employees—faculty and certain administrators—and thus had a small asset base. The UC-Regents increased the benefit structure in 1954, but that action brought the funded ratio of the plan below 100% and required higher employee contributions. In 1954, UC faculty paid the same contribution as did state teachers (CSU faculty) in CalPERS. But in the years that followed, the UC contribution increased while the member contributions in CalPERS remained unchanged. The advantages of the state system were thus seen as having a larger population covered, having a sounder financial base, requiring lower contributions, and providing higher benefits.

The legislature was receptive to the faculty's seeming desire to join CalPERS. AB 3203 was passed on July 10, 1957, potentially transferring PRAS to CalPERS. But this legislation was put on hold to give the Regents and the faculty time to make a final decision. The UC Academic Senate engaged in vigorous debate on the merits of shifting to the state system or of remaining in PRAS. Members of the UC faculty plan did not want to be forced to remain in a small retirement plan with increasing contributions and with a lower benefit structure than offered by CalPERS to other State employees.

Thus, if the Regents were to decide to maintain a separate UC plan, and not to move to CalPERS for faculty, they would have to include *all* UC employees in the UC-only plan in order to build a bigger financial base. In addition, it would have to be agreed that the member contributions in the new UC plan would not be greater than those required of State employees in CalPERS. Faculty also expressed concern about autonomy; if UC transferred PRAS to CalPERS, it was feared that there could be undesirable state interference in setting university retirement policy.

1961

In April 1961, based on consultation with the faculty, the Regents made their decision; they would maintain a separate UC retirement system, call it UCRP (University of California Retirement Plan), and extend it to all UC employees, many of whom were currently in CalPERS. They thus rejected the option under the legislation that had been put on hold which would have transferred PRAS into CalPERS. UCRP was set up as a governmental defined benefit plan established and maintained under section 401(a) of the Internal Revenue Code.

In 1961, some UC employees decided to stay in CalPERS, but many transferred to UCRP. After 1961, all new eligible UC employees were enrolled in the UC plan. And, most importantly, the Regents promised they would provide a benefit structure comparable to the one offered by CalPERS but at less expense to the State and to UC employees.

The Regents made their decision to create their own retirement plan for all their employees because they were confident of continued State support. Never—during the long decision process—did the State raise questions of eligibility for continued legislative budgetary support if the UC-Regents created their separate UC plan. Reports from that era show extensive Academic Senate debate on the issue of a separate UC Plan, with faculty comparing SERS' to PRAS' benefits on many factors, such as retirement age and survivor benefits. But there never was consideration of the possibility of losing State financial support for those employees whose compensation the State provided.

Continued state support after 1961 over three decades for the new university plan indicates that the legislature accepted the notion that it would fund the state-supported part of the UCRP population. It

is doubtful that the Regents would have established UCRP had they thought there was a chance the state would disclaim responsibility for its funding at any time in the future. Unfortunately, the fact that no one thought to write a contract to rule out the unthinkable is now taken to mean that the legislature is free not to contribute to the pension five decades after the deal was done.

The Regents concentrated on a different question entirely; could they use their autonomy to the benefit of everyone—the University, its faculty, federally—supported researchers, and the State of California? Although the Regents did not need the approval of the legislature to make the decision to create UCRP, they needed the goodwill of the State—and its funding—to make the new plan work. In creating UCRP, the Regents took into account the State's interests because they knew that they did not want to create a retirement system that would be more expensive for the State to fund than CalPERS. If UCRP were to cost more than CalPERS, the legislature would surely protest. The Regents believed that a well managed—well invested—plan could benefit all interests concerned. One factor in the decision to create UCRP was that the Regents' constitutional autonomy gave them the authority to invest the emerging UCRP assets in a full range of financial assets.

As it turned out, autonomy—plus a remarkable history of high investment returns—would make the new UCRP succeed while the older and smaller PRAS stumbled. UCRP grew in numbers of employees covered and in its asset base. The Regents more than kept their promise to the State to keep UCRP less expensive than CalPERS. Between 1978 and the end of 1982, the State paid close to 5% less for UCRP than for CalPERS. In 1983-84, the State contributed 18.3% for State miscellaneous (including CSU) members of CalPERS and employees contributed 5%, for a total contribution of 23.2%. For this same time period, the State contributed (as an IOU) only 14.9% for state-supported employees at UC and employees contributed 3%, bringing the total to 17.9%. (See Table 2 in Appendix B for a historical perspective on the State's contribution to UCRP and CalPERS.)

Now that all UC employees had a single retirement plan, except for those who opted to stay in CalPERS, they were no longer eligible to join the State system:

UC'S EXCLUSION FROM MEMBERSHIP IN PERS SYSTEM (CA GOV. CODE)

> Sec. 20301. Except as otherwise provided in this section, any person who on October 1, 1963, is employed by the university, and is a member of any retirement system maintained by the university, or who after that date enters university employment, shall be excluded from membership in this system…

UCRP CONTRIBUTION POLICY

The most complex feature of the University of California Retirement Plan is the evolution of its contribution policy that serves a large public trust, a single employer, with different cohorts of employees funded by different sources, state and non-state. But by 1983-84, the annual process of funding UCRP was long established. After the UC actuaries set the level of the contribution needed, the UC-Regents paid the employer contribution for all employees covered by UCRP based on total covered compensation.[20]

The Regents made the contribution with the full expectation that the State, the federal government, and any other private sources, which funded UC employees, would reimburse the Regents for their shares of the retirement contribution. But the reimbursement process followed a specific sequence.

First, the State would reimburse the Regents for the state-supported employees. Second, the Regents would assess a pension contribution on federal research grants at the same level set by the State but in an amount to cover the employees supported by federal research funds. And third, the Regents would assess the same level of contributions paid by the State from all other non-state sources, which would then flow into UCRP. All UC employees receive the same benefit structure, and all funding sources pay the same amount to cover their employees. But the historical funding policy of the University Plan evolved to require the State to set the contribution level for all other funding sources. The non-state sources do not pay more—and do not pay less—than the rate required for the state.

The Legislative Analyst's Office (LAO) understood the unique situation of UC retirement funding in the early—and mid-1980s. In analyzing the proposed state budget for 1984-85, the LAO listed the "retirement systems" that had requested state contributions: the Legislators, Judges, Public Employees (including State Members and School Members), State Teachers, and the University of California. Its report on the subject explained the special funding situation of the University of California: the $82.9 million state retirement contribution to UCRP for that year "represents only the state's share of contributions (about 42% of total contributions) for UC employees whose salaries and benefits are paid from state funds. The balance of contributions comes from federal and private sources."[21] And for that year, about $104 million flowed into UCRP from federal sources, UC Medical Centers, and other independent funding sources, making up a total of about $187 million in employer contributions toward UCRP (See Appendix B).

In such a carefully interlinked system of initial State funding followed by reimbursement, the consequences of nonpayment by any one party are severe, especially the State because it historically set the level of the contribution of others. If the State of California doesn't pay the retirement contribution for state-supported employees, federal, UC Medical Center, and other non-state retirement funding does not flow into UCRP.[22] Since the State only supports about a third of UC employees, if it does not pay its third of retirement contributions, the other two thirds becomes a liability of the plan. Ultimately, the Regents could be said to be liable. But the Regents have no major source of funding—apart from state appropriations—other than tuition.

State funding follows a different dynamic than does other kinds of funding at UC. State funding increases the General Fund support for UC in the year that it is awarded. In contrast, many other funding sources at UC are committed for a longer period of years. Research funding typically runs from one to three years, but occasionally even longer. If the State or Regents pay the retirement contribution and that contribution increases, the federal government does not adjust its total payment in any way. Instead, the same level of retirement contribution paid by the State must be taken out of the federal research and grant funding to support those UC employees engaged in these research projects for the duration of the grant. As new grants come along, they include provision for pension funding at the new rate (matching the State share).

Note that under this procedure, the transition to a higher rate of State contributions can be painful for those researchers administering multiyear contracts and grants. They must come up with the funding

for the pension contribution out of funds they had reserved for research purposes. In the current era—when contributions have resumed but the State refused to pay its share—the State share must come from the general core academic budget of the university. Similarly, there is no magical increase in funding for non-state sources; the UC Medical Centers and other non-state sources must reallocate current funds to include the cost of retirement contributions.

The Medical Centers are essentially competitive enterprises, competing with other local providers for patient/insurance dollars. So it should not be thought that obtaining the non-state two thirds of pension contributions is painless. In the long term, however, not obtaining the two thirds shifts that liability to the plan and to the Regents. So there is little option for the Regents other than to pay the State's share so that the matching funding from non-state sources is obtained.

1983–84 AND 1984–85

The State's response to past fiscal emergencies underscores its obligation to pay retirement benefits for state-supported employees at UC. In 1983, a budget crisis prevented the State from paying the employer contribution to UCRP. After some discussion of what should be the appropriate actuarial assumptions for UCRP, all parties agreed on a solution. The State gave the UC plan a 30-year IOU—a kind of bond—to cover its liability in lieu of its cash contribution of $101.4 million. Deferral (with interest) was preferable to UC because it kept in place the $139.7 million in contributions from non-state sources. In effect, the State made a promise of $101.4 million to avoid acquiring an additional liability of $139.7 million.[23]

As noted, there was some discussion of whether UC was using appropriate actuarial assumptions in calculating its required contributions. UC was using more conservative methodology than CalPERS. However, UC stated its position before the Joint Legislative Conference Committee considering the issue. The Regents used more conservative actuarial principles than CalPERS because UCRP's liability extended to members who are not state-supported. If the Regents underestimated contributions needed, they could not go back to the non-state sources years later and rectify the mistake. In contrast, pension funds such as CalPERS largely were collecting from state sources only. If they underestimated what was needed one year, they simply acquired a liability that the same State sources would have to pay in the future.

By the State agreeing to the deferral (the IOU rather than cash) in 1983-84, it enabled the continuing contributions from the federal government and other non-state sources. The non-state sources were linked to the State's contribution because the State was promising—via the IOU—to repay the amount owed in the future. Non-state sources were willing to view payment by IOU as sufficient to trigger their own contributions.

Had the State not made its contribution—albeit as an IOU—the then-58% of non-state retirement funding would not have flowed into the UC retirement plan. The State knew that nonpayment of its obligation would lead to a loss of all these other sources of funding, which would have adverse financial consequences. Delay could also have increased the State's liability for the full contributions actuarially required but not received by UCRP. It was in the State's financial self-interest neither to avoid payment nor to pay less than the actuarially determined amount for the state-supported UC employees. If the State had believed back then—as it seems to believe now—that it could simply refuse to pay its contribution to UCRP during Hard Times without eventually obligating itself to make up for lost non-state contributions, it is difficult to see why it adopted the IOU solution.

In the next budget year, 1984-85, the State Assembly tried once again to defer the contribution to UCRP. This time UC President Gardner addressed the Joint Legislative Conference Committee on the Budget on May 29, 1984 and made the argument that UC had revised its actuarial assumptions to reduce the State contribution to UCRP. It was also important to note that the benefit level of UCRP was lower than of CalPERS, even though both the non-academic employees of CSU and UC were, in theory, supposed to have their benefits set at the same level—the Civil Service Standard. For the State to defer its contribution to UCRP another year would be, in effect, further widening the gap in its behavior relative to the two State plans. Also in the background was the fact that the California economy, and therefore the budget outlook, was improving by 1984-85.

UC President Gardner summed up the understanding between the Regents, the Department of Finance, and the Legislative Analyst concerning UCRP:

> Last year at this time, there was a clear understanding among all interested parties that the deferral of the State's 1983-84 contribution to UCRP ($101.4 million) would be a one-time action and that, contingent upon the University's restudy of UCRP actuarial assumptions, the State would once again contribute its share to UCRP beginning with the 1984-85 fiscal year. The University, pursuant to this understanding, not only restudied but significantly revised the UCRP assumptions. These revisions, which were major, resulted in a decrease of about $37 million in required General Fund contributions. The revised assumptions, which were recommended by independent actuaries, were agreed to by the Regents, the Department of Finance, and the Legislative Analyst. In light of this, the University is now requesting that the State's contribution to UCRP be resumed, consistent with the understanding of a year ago.

All parties understood that the obligation to fund UCRP was different from that of CalPERS; CalPERS was funded by statute and UCRP was funded by agreement based on the State-supported payroll. In addition, the State was the single funding source for CalPERS but only one of many for UCRP. Still, the State was the single largest contributor, and it was important that the Regents based their actuarial assumptions on that different funding status and on occasion updated those actuarial assumptions to keep in line with CalPERS. Moreover, perhaps unspoken, there was a concern that if the legislature made a practice of funding UCRP using IOUs, eventually there might be objections from the non-state sources. After all, the non-state sources were being asked to match promises of cash from the State with actual cash.

THE UCRP FUNDING SURPLUS

These historical dynamics explain, in part, why resuming contributions at UC has been so difficult in the recent past. It has not been a question of the UC Regents and the UC employees hoping that someone else would pick up a bill that keeps increasing over time. It has been more a realization that the funding surplus is over. Now federal funding devoted to research, science, and medicine has to be significantly decreased at a time of other budget cuts and general economic downturn in order to spread that funding further to cover retirement. Resuming contributions after such a long suspension will affect every aspect of the University community. The effect will be felt by faculty and staff accepting a decrease in total compensation and by researchers in science and medicine realizing that fewer funds will be available to conduct research and to serve patients than they had available to them in the past.[24]

The prefunding success of UCRP between 1990 and 2010 was extraordinary. Investment return alone

covered UC retirement costs for 20 years, without anyone having to pay contributions. The CalPERS Board typically has expected that 75% of benefits will be paid from investment earnings. UCRP investment earnings, in contrast, paid 100% of benefits for 20 years. It is likely that UCRP is the only major DB plan ever to have achieved that record.

Actuarial restrictions prevent overfunding as well as underfunding a retirement plan. For UCRP, continued contributions after 1990 would have violated the full funding policy for UCRP passed by the Regents themselves for the 1990 plan year. Under that new funding policy, UC would suspend contributions when the smaller of the market value or the actuarial value of UCRP assets exceeded the lesser of the actuarial accrued liability, or 150% of the estimated current liability.[25] It was that policy that gave rise to the two-decade contribution holiday that followed.

Funding surpluses often encourage retirement Boards to increase benefits, as happened in the State in 1999 when the Legislature passed SB 400, which increased state workers' pensions under CalPERS by as much as 50% and made the benefit increases retroactive. But the Regents were conservative in handling the UCRP funding surplus. The halt of contributions to UC in 1990 reduced retirement costs just as the State was entering a budget crisis.

Ultimately, that crisis prompted the UC Regents to cut pay and to use the pension fund to encourage early retirement on a temporary basis to downsize. In three waves, UC offered faculty early retirement incentives funded by UCRP. The result was that older, long-service faculty and staff retired sooner than might have been expected, thus reducing the UC payroll.[26]

Although no contributions were made to the overfunded pension, the UC Regents did not want employees to forget the process of contributing to retirement (deductions of some percentage of salary from payroll on a pretax basis). So they required employees to contribute roughly 2% of their salary into a new DC plan. The existence of that plan meant that when contributions to the basic DB plan again became necessary, contributions to the DC plan would cease and future contributions would be rerouted back to UCRP.

Over the years, UCRP was not the only state funded retirement plan to achieve overfunded status, i.e., assets exceeding liabilities to the extent that neither the employer nor the employee paid contributions. For example, neither the State nor the school teachers and community college faculty had to contribute to retirement to CalSTRS between 1998 and 2002 because of that plan's overfunded status. But in July 2002, the State contributed 2.3% of covered compensation to resume contributions to CalSTRS when the actuaries called for contributions at that level. The problem for UCRP is that its contribution holiday was so much longer than those of other plans that the State grew accustomed to not funding the UC pension. Legislators apparently developed the belief that the UC pension system would take care of itself indefinitely with no consequences.

Once the overfunding of UCRP ceased, there was resistance in the legislature to any resumption of contributions. At one point, then-Governor Schwarzenegger included a token $20 million State UCRP contribution in a budget proposal, apparently simply to reestablish the idea of contributing. But the Legislative Analyst insisted that the State had no legal obligation and the legislature actually declared that interpretation to be valid in the eventual budget enactment. Subsequently, the legislature dropped the no-legal-obligation language but the State has yet to provide any cash or even any IOU-type contributions.

THE REGENTS ADOPT THEIR OWN PENSION SOLUTION (FOR NOW)

It was well known—long before the Great Recession—that at some point, the contribution holiday for UCRP would have to end. Plans began to be made for a resumption of employer and employee contributions. However, it was not anticipated by UC administrators or by the Regents that the State would abandon its earlier practice of paying the employer share of contributions for State-funded employees. When it became apparent that the State would not pay, the funding problem of both the pension and the general UC budget became more acute.

Because of mounting concerns over pension funding, UC established a Post-Employment Benefits Task Force (PEB) composed mainly of high-level administrators plus the chair and vice chair of the systemwide Academic Senate. The PEB Task Force reported on pension options in July 2010.[27] In essence, the options investigated involved an alternative two-tier system, i.e., lower pensions for new hires to reduce the normal cost of the system. DB, DC, and combinations of both were considered for the lower tier.

However, there was strong support, particularly from faculty, for continuing the DB model even if the system for new hires had to be made less generous. Ultimately, in response to these pressures, the decision was made to remain with DB. In December 2010, the Regents set in motion a ramping up of both employer and employee contributions to the current plan combined with a new two tier arrangement. The lower tier for new hires would begin operating in fiscal year 2013-14.

One of the funding options under review while the PEB Task Force was in operation was the use of some form of IOU or some form of borrowing through "pension bonds" by the Regents to cover the share that would have been provided by the State before the contribution holiday. As noted earlier, there was a history of the State putting an IOU into the UC pension trust for the employer share covering State-funded employees so that contributions at the same rate could be received from non-state sources. Borrowing to cover the State share has not occurred as of this writing. However, UC has transferred into the pension trust certain monies it had held in its Short Term Investment Pool (STIP), an amount over $1 billion.[28] Overt borrowing might still be used at some point in the future. The Regents have given the UC president the option to make such decisions.

Even with the STIP transfer and the lower tier, current projections are that the employer share of pension contributions will rise steadily to 18.8% of covered payroll by 2016. UCRP would reach 100% funding roughly in 2040. Employee contributions would have to rise to over 7% to meet that goal. The advent of the lower tier is intended to reduce the normal cost of the program from over 17% of covered payroll to a little over 15%. Nonetheless, the problem of a lack of state funding remains critical.

In fiscal 2011-12, the State allocation to UC for its core academic programs was about $2½ billion. Fifteen percent of covered payroll would be about $1.2 billion. If we assume that about two thirds would come from non-state sources, about $400 million would be the normal cost (at the new, lower rate) of the plan for State-funded employees. If the employee-employer split of that amount was also about two thirds, the employer share would be about $267 million. That would be a little more than a 10% increase in the current allocation to UC. The magnitude weighed against the overall State budget is not impossible. But at this writing, the State is expected to make a midyear

cut of $100 million from the allocation to UC, thanks to a "trigger" provision in the 2011-12 budget.

At the end of fiscal year 2010-11 (June 30, 2011), assets in UCRP at market value stood at $41.9 billion but the actuarial value of liabilities came to $51.8 billion, for a funded ratio of about 81%. The difference between assets and liabilities represents an unfunded liability of about $10 billion. Covered payroll stood at a little over $8 billion and involved more than 115,000 employees. Over 56,000 individuals (employees and dependents) received benefits from UCRP and still others had vested claims on the plan.[29] The plan paid out close to $2 billion to retirees, dependents, and disabled beneficiaries.

By any standard, UCRP is absolutely a very large pension plan. But because it is dwarfed by CalPERS and CalSTRS, its unique problems—and the problems it poses for the UC budget—tend to be lost in discussions of public pensions in California. Thus, when Governor Brown—an *ex officio* member of the UC-Regents—issued his public pension proposals in the fall of 2011, it was unclear from his presentation whether UCRP was intended to be covered. Only discussion with state administrative officials made it clear that UC was intended to be covered.

At this writing, no one knows what fate awaits the Brown proposals. While some of Brown proposals are similar to the two-tier changes made by the Regents, others are incompatible with what the Regents decided. For example, the Brown proposals envision a two-tier arrangement with the lower tier being a "hybrid" mix of DB and DC. But the Regents' plan for the lower tier is a pure DB. It is conceivable that further discussions with the governor and the legislature could result in UC being dropped from the Brown plan. And it is unclear what fate the governor's plan—with or without UC—will face in the legislature or before the voters. Other pension proposals may wind up on the ballot in California as early as 2012.

Thus, the Regents are left to make pension policy in an uncertain environment in which their decisions could be abruptly voided.

Adding to the difficulty of making pension policy is the fact that pensions as a form of employee compensation cannot be isolated from other pay and benefits. Ultimately, employers need to be competitive in the marketplace. In particular, faculty members at UC campuses are recruited from a national and, in some cases, international academic labor market. UC uses a comparison methodology in evaluating faculty pay against an average of eight other major universities, four public and four private. Its surveys have shown a UC faculty pay lag relative to the "comparison-8" institutions. To the extent that employee contributions go up—but benefits do not—or that future employees beginning in 2013 come under a less attractive pension program, the competitive problem for UC is made more difficult.

CONCLUSION

UC has operated its current pension system since the early 1960s, although it has a much longer history of pension programs. At the time its current pension system was created, there was no thought that the State would fail to contribute the employer share of pension contributions for State-funded employees of UC. However, a long period of an overfunded pension plan at UC led the State seemingly to forget its earlier standard practice. Thus, the UC-Regents have been confronted with a need to fund the pension out of the general state appropriation for core academic programs. So far, the legislature has shown no willingness to bump up its appropriation, even by IOU, to handle the need for pension contributions.

Compounding the pension funding problem for the Regents is the uncertain political climate around the more general public pension issue in California.

Although the Regents have formulated their own pension changes, their decision could be overridden by proposals made by the governor in the fall of 2011 or by other proposals that may end up on the ballot. The UC pension system is large absolutely but is small compared to CalPERS and CalSTRS. Thus, UC tends to be swept into statewide proposals without reference to the action the Regents have already taken or the suitability of the one-size-fits-all proposals that have been circulated. In particular, the fact that two-thirds of pension contributions for UC come from non-state sources tends to be lost in the controversy over public pensions.

At any rate, the result of a lack of state funding for the UC pension is inevitably intensified upward pressure on tuition, the only revenue source over which the Regents have direct control. As a result, a continued policy by the State not to contribute as it once did—along with other cuts to the UC budget—will lead to a slow-motion, *de facto* pressure toward privatization of UC. That result may not be what the legislature and governor intend. But it is the inevitable consequence, nonetheless.

1 Susan Gallick is Executive Director of the UCLA Faculty Association. This chapter is based on a document available on the Association's website at http://www.uclafaculty.org/FASite/Home_files/UCRPinContextFinal.pdf. All references for this chapter that are not directly cited can be found in that underlying document, originally assembled in response to the position of the Legislative Analyst's Office concerning pension funding for the University of California. The document was edited into chapter format by Daniel J.B. Mitchell.

2 The governor's plan can be found at http://gov.ca.gov/docs/Twelve_Point_Pension_Reform_10.27.11.pdf.

3 The LAO provides non-partisan advice to the legislature on policy matters including the State budget. While the legislature is not obligated to follow LAO advice, opinions expressed by the LAO can influence State policy.

4 Pension administrators must make an assumption about likely future earnings on their assets. In the UC case, the assumption as of 2011 was 7.5%/annum, somewhat below (more conservative than) the assumptions made about CalPERS and CalSTRS. The issue of earnings assumptions is complex. Suffice it to say, the lower the estimate of future earnings, the greater the estimated unfunded liability. Note that the estimated unfunded liability is just that—an estimate. Actual earnings will turn out to be whatever they turn out to be, regardless of prior estimates. However, an underestimate of future earnings ultimately will require greater pension contributions to make up the difference between the estimate and the reality.

5 In the current UC defined benefit pension plan, there are age factors ranging from 0.011 (at age 50) to 0.025 (age 60 and beyond). The basic formula is years of covered service x appropriate age factor x base monthly salary. The base salary is the highest three years—$133 per month adjustment for Social Security. If an employee had a yearly salary of $120,000 in the highest three years ($10,000/month) and retired at age 65 with 25 years of service, his/her monthly pension would be ($10,000-$133 = $9867) x 25 x .025 = $6166.88. Some long-service employees are not covered by Social Security and do not have the $133 subtraction. The pension is capped at 100% of base pay. To earn 100%, an employee would need forty years of service, be 60 years old or older, and not be covered by Social Security. More details are at http://atyourservice.ucop.edu/forms_pubs/spd/ucrpspdwss.pdf

6 The insurance is subject to a cap on the level of pension the agency—the Pension Benefit Guaranty Corporation (PBGC)—will provide. Thus, certain high paid employees whose plans are transferred to the PBGC will see their pensions reduced.

7 California's Little Hoover Commission issued such a call in 2010. See http://www.lhc.ca.gov/studies/204/Report204.pdf

8 Many universities in the U.S. have DC plans that were created in an earlier era when mandatory retirement at a specified age was legal. Thus, at the time those plans were created, the renewal problem was resolved through mandatory retirement.

9 University of California employees are covered by Social Security. A few employees at UC—a decreasing number—elected not to be covered by Social Security when the Regents decided on such coverage. Under federal law, when a public jurisdiction elects Social Security coverage, existing employees are given the right to accept or decline coverage.

10 Public workers receiving government pensions based on uncovered employment have their Social Security pensions based on covered employment reduced.

11 The labs are now co-managed by UC with a private partner. Workers in those labs were spun off into a separate pension program when the labs moved from sole-management by UC to co-management. However, already-retired workers from the labs are part of the UC program.

12 Pension funds often use an actuarial value of assets—a multiyear moving average of market values—to smooth the funded ratio. The smoothing means that losses or periods of low earnings are only gradually recognized as are periods of high earnings. Figure 1

thus shows the 2010 funded ratio on an actuarial basis above the ratio on a market basis since the stock market decline that accompanied the Great Recession was not yet fully been recognized. By 2011, however, the actuarial funded value and the market funded value happened approximately to converge.

13 "Self sufficiency" seems to be the current euphemism in use at UC for privatization.

14 The University of Michigan moved towards privatization in the face of fiscal problems of its home state. As such, the so-called "Michigan Model" is often seen as an example of that trend.

15 As will be noted below, UC had a system for faculty created prior to CalSTRS under which commercial retirement annuities were bought for UC faculty members.

16 In the late 1920s, California had a more elderly demographic profile than the average state and was a leader in providing assistance to older individuals without other means of support. The issue of pensions generally became a major factor in state politics during the 1930s and 1940s, but subsided as California became a youth state due to the influx of young GIs after World War II and later the influx of immigrants.

17 Community colleges are covered by Proposition 98 of 1988 and the related Proposition 111 of 1990 which funding formulas for K-14 and—as noted in the text—by CalSTRS for pensions.

18 When UC moved to create its own pension system—see the section below—some UC employees chose to remain in CalPERS. There are still some retirees from UC and some older workers at UC under CalPERS as a result.

19 An annuity is a contract to provide a fixed monthly income for the life of the recipient. Annuities can be purchased from private insurance companies.

20 Not all earnings of UC employees are covered by the basic pension under UCRP. For example, student teaching assistants—who work during their careers as graduate students—are not covered. Pay above the base salary for covered employees is not included in pension coverage. Those hourly UC workers eligible for overtime pay do not receive coverage on their overtime payments. Faculty on nine-month appointments who then work over the summer teaching summer school courses or doing research projects do not have their summer pay covered. These exclusions are designed to prevent pension "spiking." The basic amount on which the UCRP pension is based is the highest three years which, for most workers, is the last three years of employment. Absent these coverage exclusions, an employee could potentially inflate ("spike") final pay by making additional money beyond the base salary.

21 See http://www.lao.ca.gov/analysis/1984/pandi_84_part3.pdf.

22 Federal funding overlaps with UC Medical Center funding. Roughly one third of the funding for the UC Medical Centers comes from federal research and grants including the National Institutes of Health (NIH).

23 Note that at that time, the percentage of non-state funding was less than two thirds. 101.4/(101.4+139.7) = 58%.

24 Other things held constant, a rise in the employee contribution reduces the take-home pay of faculty and staff but there is no corresponding increase in the pension benefit provided.

25 The actuarial value of assets or liabilities involves a smoothing process of five-year averaging. The current value means the actual market value at any point in time.

26 Some faculty members who took the early retirement option were recalled on a part-time basis to teach a particular course or to perform some other function. It was less expensive from a payroll viewpoint to pay for these services than to keep the individuals as full-time employees.

27 The report of the Task Force is available at http://ucrpfuture.universityofcalifornia.edu/files/2010/08/peb_finalreport_082710.pdf The Task Force also considered issues related to retiree health care, a program which is not pre-funded.

28 The STIP is a kind of "checking account" for UC to handle the inflows and outflows of funds. A balance is needed since the timing of inflows and outflows do not necessarily match. STIP allows the university to make payments when they are due, even if the receipts to support those payments arrive subsequently. In effect, the decision to transfer STIP funds to the pension represented a decision that UC could operate with less liquidity than in the past. The UC bond rating in part depends on the university having adequate liquidity on hand.

29 Data from a report to the November 2011 Regents meeting available at http://www.universityofcalifornia.edu/regents/regmeet/nov11/f2.pdf and http://www.universityofcalifornia.edu/regents/regmeet/nov11/f2attach1.pdf

APPENDIX A

CONSTITUTION: ARTICLE 9 EDUCATION, SEC. 9.

(a) The University of California shall constitute a public trust, to be administered by the existing corporation known as “The Regents of the University of California,” with full powers of organization and government, subject only to such legislative control as may be necessary to insure the security of its funds and compliance with the terms of the endowments of the university and such competitive bidding procedures as may be made applicable to the university by statute for the letting of construction contracts, sales of real property, and purchasing of materials, goods, and services. Said corporation shall be in form a board composed of seven ex officio members, which shall be: the Governor, the Lieutenant Governor, the Speaker of the Assembly, the Superintendent of Public Instruction, the president and the vice president of the alumni association of the university and the acting president of the university, and 18 appointive members appointed by the Governor and approved by the Senate, a majority of the membership concurring; provided, however that the present appointive members shall hold office until the expiration of their present terms.

(b) The terms of the members appointed prior to November 5, 1974, shall be 16 years; the terms of two appointive members to expire as heretofore on March 1st of every even-numbered calendar year, and two members shall be appointed for terms commencing on March 1, 1976, and on March 1 of each year thereafter; provided that no such appointments shall be made for terms to commence on March 1, 1979, or on March 1 of each fourth year thereafter, to the end that no appointment to the regents for a newly commencing term shall be made during the first year of any gubernatorial term of office. The terms of the members appointed for terms commencing on and after March 1, 1976, shall be 12 years. During the period of transition until the time when the appointive membership is comprised exclusively of persons serving for terms of 12 years, the total number of appointive members may exceed the numbers specified in the preceding paragraph. In case of any vacancy, the term of office of the appointee to fill such vacancy, who shall be appointed by the Governor and approved by the Senate, a majority of the membership concurring, shall be for the balance of the term for which such vacancy exists.

(c) The members of the board may, in their discretion, following procedures established by them and after consultation with representatives of faculty and students of the university, including appropriate officers of the academic senate and student governments, appoint to the board either or both of the following persons as members with all rights of participation: a member of the faculty at a campus of the university or of another institution of higher education; a person enrolled as a student at a campus of the university for each regular academic term during his service as a member of the board. Any person so appointed shall serve for not less than one year commencing on July 1.

(d) Regents shall be able persons broadly reflective of the economic, cultural, and social diversity of the State, including ethnic minorities and women. However, it is not intended that formulas or specific ratios be applied in the selection of regents.

(e) In the selection of the Regents, the Governor shall

consult an advisory committee composed as follows: The Speaker of the Assembly and two public members appointed by the Speaker, the President Pro Tempore of the Senate and two public members appointed by the Rules Committee of the Senate, two public members appointed by the Governor, the chairman of the regents of the university, an alumnus of the university chosen by the alumni association of the university, a student of the university chosen by the Council of Student Body Presidents, and a member of the faculty of the university chosen by the academic senate of the university. Public members shall serve for four years, except that one each of the initially appointed members selected by the Speaker of the Assembly, the President Pro Tempore of the Senate, and the Governor shall be appointed to serve for two years; student, alumni, and faculty members shall serve for one year and may not be regents of the university at the time of their service on the advisory committee.

(f) The Regents of the University of California shall be vested with the legal title and the management and disposition of the property of the university and of property held for its benefit and shall have the power to take and hold, either by purchase or by donation, or gift, testamentary or otherwise, or in any other manner, without restriction, all real and personal property for the benefit of the university or incidentally to its conduct; provided, however, that sales of university real property shall be subject to such competitive bidding procedures as may be provided by statute. Said corporation shall also have all the powers necessary or convenient for the effective administration of its trust, including the power to sue and to be sued, to use a seal, and to delegate to its committees or to the faculty of the university, or to others, such authority or functions as it may deem wise. The Regents shall receive all funds derived from the sale of lands pursuant to the act of Congress of July 2, 1862, and any subsequent acts amendatory thereof. The university shall be entirely independent of all political or sectarian influence and kept free therefrom in the appointment of its regents and in the administration of its affairs, and no person shall be debarred admission to any department of the university on account of race, religion, ethnic heritage, or sex.

(g) Meetings of the Regents of the University of California shall be public, with exceptions and notice requirements as may be provided by statute.

APPENDIX B

History of UCRP Funding, Prior to the Resumption of Employer and Employee Contributions

Fiscal year ending June 30:	Employee Contributions in $ millions	Employer Contributions in $ millions
1980	$41	$193
1981	$49	$229
1982	$52	$248
1983	$33	$256
1984	$42	$249
1985	$56	$187
1986	$62	$262
1987	$68	$262
1988	$72	$258
1989	$80	$211
1990	$87	$162
1991	$42	$47
1992	$0	$0
1993	$0	$0
1994	$0	$0
1995	$0	$0
1996	$0	$0
1997	$0	$0
1998	$0	$0
1999	$0	$0
2000	$0	$0
2001	$0	$0
2002	$0	$0
2003	$0	$0
2004	$0	$0
2005	$0	$0
2006	$0	$0
2007	$0	$0
2008	$0	$0
2009	$0	$0

NOTE: The employer contribution given here reflects the total contribution from all sources including the State, the federal government, contracts and grants, and the UC Medical Centers. These figures reflect only the basic pension plan support, not all elements of the UC retirement system.

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